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By

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SZEGED, 1993

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TABLE OF CONTENTS

FOREWORD

On 16th September 1993 we will celebrate the centenary of the birth of internationally renowned Hungarian scientist, Albert Szent-Györgyi, after whom our university is named.

With his work as a scientist and a teacher, and also with his profound humanity and democratic spirit, the Nobel Prize winner Szent-Györgyi. who was professor, dean, rector and Honoris Causa doctor of the University, has left a lasting legacy for faculty and students alike.

The present volume, which is published to commemorate his centenary, chronicles the most creative period in Szent-Györgyi's career (1928-1945), which he spent in SZEGED. It presents him as a research scientist, a friend of young people, and an enthusiastic supporter of arts and sport.

His memory serves as an inspiration for all of us.

Loránd L. Fráter
Rector

BEFORE SZEGED

Albert Imre Szent-Györgyi of Nagyrápolt was born in Budapest on 16th September 1893, from an old Transylvanian family. His great-grandfather Imre Szent-Györgyi royal governor, signed the Act on union of Hungary and Transylvania in 1848. His grandfather Imre Szent-Györgyi was under-secretary of judicature. Albert's father, Miklós Szent-Györgyi was an assistant lawyer when his son was born, later he was bailiff in the estate of Kis-kér puszta in Nógrád County.[1] His wife, Jozefa was the daughter of Professor József Lenhossék. Heritage of scholar dynasties of Pauler-Markovics-Lenhossék mingled on maternal branch in Szent-Györgyi family (cf. Annex No. 1).

Albert spent his childhood in their quarters in Ráday Street of Budapest and in the mansion of Kis-kér in quiet, secured circumstances. He learned music and languages. His brother Paul early manifested his musical talent and became violinist.[2] They studied with one year difference at Reformats' Secondary school in Lonyay street. Albert Szent-Györgyi emphasised the maternal effect in their upbringing in his autobiography written in 1963:

> "... I presume teaching and education of people starts before their birth. My education started in the last century, in the beginning of 1800s, when a barefoot peasant boy started Southward from the remote and backward North Hungary to find knowledge. He went to Pozsony and worked for a chemist as an errandboy. Two decades later he was a Professor of physiology in Vienna. He returned later to Hungary to be one of the leaders of Hungarian health care. The son of that boy became also a professor and scientist and his son, my maternal Uncle, Mihály Lenhossék, a histologist of note ..."[3]
>
> Beside direct maternal effect, his Uncle the unmarried Mihály Lenhossék, the unspoken head of the family, was the spiritual guide of Albert. As Albert Szent-Györgyi wrote in another part of his autobiography, nobody relied he would accomplish anything in life. He was a late maturing boy, failed from three subjects in fifth class - among others from chemistry - and tutors helped him to get through. A sudden, beneficial change occurred in his puberty. He passionately devoured books and decided to be a scientist. The decision astonished his Uncle. He frequently told "... such a lazy boy has not too much chance as a scientist ..." First he meant him to be a cosmetician, then a dentist. Since his results were good in the eighth class, after a successful maturity exam his Uncle finally allowed him to enrol to the Medical Faculty of Budapest University of Sciences in 1911.

He was first year student when he wrote his first scientific paper at the Department of Lenhossék. The subject of the paper was study on anal epithelium. Then the professor gave him new subject, which resulted in a paper entitled "Studies of vitreous body", published in a journal of the Academy.[4] He had respect as a histologist as a third year student, when he was drafted in 1914.

He worked in the military hospital of Miskolc, and then as a volunteer of the 65th Infantry Regiment he was taken to the Russian Front on the Dneiper. As many others, he shot his arm to get rid, after three years of unreasonable struggle. For his "injury" he got silver medal and was released for a longer time. He used the time of recovery to prepare for his university examinations and graduated in 1917. On 19th September of the same year he married Kornélia Demény, daughter Károly Demény under-secretary, Manager General of Hungarian Post. After his recovery he was sent to the bacteriological laboratory of a Military Hospital in the Italian front. A professor was there from Vienna, who conducted hazardous pharmacological tests on war prisoners. Szent-Györgyi refused to work with him and reported the tests at the headquarters. The professor was however, in higher rank (Szent-Györgyi was lieutenant at that time). As a punishment he was transferred to the Italian front on a marshland, where tropical malaria was devastating. Fortunately, the whole front collapsed after a fortnight and in November of 1918 he was discharged.

His first post was an assistant professorship at the Department of Pharmacology of the University of Pozsony where he worked with Professor Géza Mansfeld. Pozsony, however, was annexed to Czechoslovakia by the Trianon Treaty and Hungarian institutions had to leave Pozsony. Szent-Györgyi in worker disguise crossed the border one night with his family, carrying his scientific instruments with himself.

With his mean maternal heritage he started his wandering. With his wife and daughter Kornélia (Nelly) he moved first to Prague for a short while, where he conducted electrophysiological studies at the Department of Physiology of Professor A. Tschermak, then he worked as an assistant at the Laboratory of Professor L. Michaelis in Berlin (1919-1920). Since there was no possibility for his permanent appointment he decided to go to the Tropics. Therefore, he conducted bacteriological and chemical research at the Institute of Tropical-Hygiene of Hamburg (1920-1921). Then he worked at the Department of Pharmacology of Leiden in the laboratory of Professor Verzár, who soon after returned to Hungary. During these two, extremely active years (1922-1923) he turned his attention to chemical processes in the background of physiological phenomena and pharmacological effects. Upon the invitation of Professor Hamburger he became professor at the University of Groningen (The Netherlands, 1923-1926). In that four-year period - which was his first permanent job - he started his thorough study on cell oxidation, and the results of his experiments settled the dispute between O. Warburg and H. Wieland.

The sudden death of Professor Hamburger put him on way again, and because of his uncertain situation he sent his family back to Hungary. For a short while he was working in London as a visiting research worker of Medical Research Council. Invitation of Professor F. G. Hopkins reached him at the verge of starvation and despair, thus in 1923 he moved from The Netherlands to Cambridge where he worked up to his homecoming to SZEGED in 1930. Here he first isolated Vitamin C - what he called hexuronic acid at that time - from various plants and adrenal glands of animals. To produce higher amount of that substance necessary for his work, upon the invitation of Professor E. C. Kendall he spent a year at the Mayo Clinic in Rochester (USA, 1926-1927). From adrenal glands got from the huge slaughterhouses there, he managed to isolate 25 grams hexuronic acid and then returned to Cambridge. Here he obtained his Ph.D. degree in chemistry in 1927.

APPOINTMENT TO SZEGED

An unprecedented upheaval started in SZEGED after releasing from the Turkish oppression in 1686. The Council of the town submitted a claim for permission to establish a College in two classes of Secondary School of Piarists in 1790, and they got the permission two years later. Up to its close up in 1859 that was the only institution of higher education in Southern Hungary. There was another initiation of the town Council, namely to establish an Academy of Law instead of that one transferred from Pécs to Győr. The real struggle for establishment of a University started in the year of great flood, in 1879. These attempts were repeated nine times upto 1921.

Upon the Rumanian invasion of Kolozsvár on 24th December 1918, arouse the idea of moving József Ferenc University of Sciences to SZEGED. A century long dream of the town was fulfilled, when on 20th of May, 1921 the National Assembly accepted the proposal for the "temporary" transfer of the University to SZEGED. The ceremonial inauguration was on 9th October 1921 and on 12th of October, tuition started.

Trianon Treaty changed the situation of the town by that becoming a border-town, and prevented all the economic and cultural progress of the former decades. Crisis in economy, unemployment, flats in cellars, thousands of refugees created a despairing situation spoiling the joy over becoming a University town. Finding place for the University Departments, professors, for the several hundreds of students and for University canteen and student hostels, all demanded superhuman sacrifice from the town.

Even temporary places could be found only at the expense of lower education. The town sacrificed a public elementary school in Rókus district and another one in Móra district for some of the preclinical departments. Buildings of a secondary and a technical school gave home for the departments of natural sciences and some clinics. Public buildings in the downtown area, in Dugonics square housed the Faculties of Law, Arts and Sciences and the Central Library.

Housing of Departments of Medical Faculty could be solved relatively simply, since the building of technical school was suitable for Clinical Departments. Though the basement where Central Pharmacy and Laboratories of Department of Medical Chemistry placed was dark and damp.

Temporary settling, unfortunately, became final and a significant extension of the University seemed to be inevitable. General Assembly of the Town Council held on 30th June, 1924 made an offer to invest the price of 2,400 cubic metres wheat annually for fifty years, to solve the permanent housing problems of the University.[5]

Construction works were started and progressed at an astonishing "speed" by designs of Béla Rerrich and majority was finished, or remained unfinished due to the economic crisis in 1930.

Town of SZEGED became more and more indebted because of the financial burdens of investments in the University, which amounted to 23 million Pengős between 1926-1930.

Housing of academic staff of the University was also a pressing problem. The Town Council started requisitioning flats for professors and assistants as early as 1921, but it did not solve the problem. Several professors of the Medical Faculty were living in their Departments (Professors Lőte, Jancsó, Rigler, Vidákovits, Lechner and Imre).[6] It could be solved only with further construction works, and two two-storey houses were built for University staff in Tábor street.[7]

Even worse was the housing condition of the several hundreds of students in the first years. Student enrollment was 1,007 in 1921 (511 medical and 48 pharmacy students) majority of which came from the annected regions from Transylvania first of all. Maintenance of University Canteen and student hostels was a really great burden. Many students had their meals at the communal kitchen.

SZEGED got rather little from state loan turned into the support for Hungarian universities. Compared to the sums of 75.055,551 and 26.924,804 Crowns that universities of Budapest and Pécs got, respectively, share of SZEGED was only 22,937.980 Crowns. Due to inflation, value of facilities ordered earlier decreased. Some professors worked with instruments of their own. Economic crisis of the 30s threatened the existence of the University, though the number of students doubled, and during the ten years passed it was 2,163 in 62 Departments in the academic year of 1931/32.

Equipment of the University was sufficient only for humanitarian and educational activities. Research work was hampered both by inadequate laboratories and facilities and by the lack of proper international contacts.

Demonstrations and series of atrocities encouraged by "Turul Fraternal Group" followed each other, when the academic staff of Medical Faculty tried to overrule "numerous clausus" which limited proportion of Jewish students in 6 %. These movements were at the time of the prolonged Rectorship of Béla Reinbold whose death may have been well caused by that events.

An "ad hoc" Committee started correspondence with Albert Szent-Györgyi in Cambridge so that he would take the chair of the Department of the former Rector. Records taken at the Faculty Committee meeting of 24th February 1928 proved that "Szent-Györgyi would readily accept the offer provided with time up to the spring of 1929 to finish his research work started in Cambridge".

In the Committee meeting one month later, the Dean reported on the particulars and scientific career of Albert Szent-Györgyi. He discussed his 60 papers and participation at international congresses. His important research work making his name well-known in world of science was also emphasised. Suggested by the Committee, the Faculty agreed upon his invitation with an unambiguous vote of 10.

Minister of Cultural Affairs, Kunó Klebelsberg appointed him the Head of Department with one year leave of absence. It was published in the 16th September, 1928 issue of Budapest Communications.

On 29th September, 1928, Albert Szent-Györgyi took a ceremonial oath, the Rector welcome him and wished success in his new post.

Since his research project in Cambridge had not been finished, he asked for another year leave of absence.

During that time Béla Issekutz substituted him, but he was of a great help for him later on as well. Szent-Györgyi wrote about it later in his book "Contemplations of a Biologist".

> "... It is a great pleasure for me to recommend these lines to Professor Béla Issekutz, who gave me so much help and support in my first days in SZEGED, and whose friendship was always so much appreciated. I hope these lines will convince him that his trust was not invested unworthy - which I myself - and it is the most important for me - tried to prove with my scientific research and activities".[8]

THE NEW PROFESSOR

The staff of the Department of Medical Chemistry accepted with great expectation their new chief, the "world travelled Prof", "Albi" as they called him.

Even at that time, at age of 37 with white curly hair, young smiling face, ever-in-hand English pipe made him well-known out of the University as well. He was a casually elegant type of man.

Everybody liked him because of his spontaneity and informality, but his extravagancy sometimes astonished the people of country way of thinking. When he took his first visit to his fellow-professors by his bicycle and a short while later he appeared at a ceremonial "sub auspiciis" inauguration in tail-coat and top-hat by motor-cycle.

Later he drove a car and his little Buick was admired as he stepped out in sport-suit with tennis-racket in hand, freshly and youthfully. In the car were also his wife and daughter similarly in sport-clothes with their tennis rackets.

He was romantic, liberal, revolting, but easy going and casual at the same time. To his colourful, contradictory personality equally belonged the crave and respect of science, love of his work as well as human and scientific modesty. He was a predecessor of the modern type of scientist.

After the vast American dimensions, well equipped Western European Institutes, ancient walls of Cambridge, there he was in the small laboratory of a dusty little town of the Great Hungarian Plain and devoted his attention to his instruments. For him, not the surroundings but the work was important. And there in that small laboratory he discovered the secret of extracting Vitamin C from paprika. Work, home, family and co-workers got close to each others. With his family (his mother also lived with them) he moved into one wing of the building in Kálvária square, while assistants lived in the other part of the building. They worked, had meals and played sport games - basket ball, volley ball - together. Games for reinvigorate body and spirit altered the work after lunch.

When the Department moved into the new building under the arcades of Dóm square, the Professor moved into the house in the 14th, Rudolf square. The Department here in one of the nicest parts of the town was like a domiciliary hotel or a sanatorium. Thank to Rockefeller Foundation and other supports, their laboratory facilities were modern, and research staff was permanent.

His co-workers during their common work talked about him as their "much loved professor". He was with them, not only in the laboratory but also in the life. Every afternoon at five o'clock they stopped working, and sitting in the "tea corner" they were talking about politics, literature, art and about everything but for scientific work. Private life of his co-workers was also important for him. He helped them if they needed in their problems. With a witty anecdote, he could ease the atmosphere even of the most serious work.

Laboratories of his Department were regarded home and a pleasant place to be. Beside sport games, they held concerts, jolly parties, and in jokes the Professor always had a great share.[9]

He worked at high intensity and his optimism was of great influence on his colleagues. Always full of plans he could create an inspiring atmosphere.

> "... He raised team work to an unprecedented level in both human and scientific sense. His first co-workers Ilona Banga, Kálmán Laki, Brunó F. Straub and Mihály Gerendás became internationally acknowledged scientists beside him ..." remembers Dániel Bagdy.[10]

Very often he was sitting at his desk as early as four in the morning, working on his actually "most important" subject. It may have been his own work or his co-workers' to be prepared for publication. He took with him his colleagues even on his ski-tours. Their pack contained: a packsack, skiboards and a typewriter. Their programme: skiing in the morning, scientific work in the afternoon and long talks in the touring hostel in the evenings. He was in deep silence when someone was arguing with him. But if the argument was justified he merrily gave up on the third day.

His new humanitarian and "professor" behaviour manifested in several "minor", characteristic steps. It was striking, that while every Department invited students for scientific thesis in an individually assigned subject, students from Szent-Györgyi's Department participated with freely chosen subjects. And that free option served the reveal of talent better, it proved that his colleagues became successful in their fields - as for example Kálmán Laki, Brunó F. Straub and Béla Hoffman.

He could often be seen coming early morning to the tennis grounds in New SZEGED with his wife, who was an excellent player and champion of South-Eastern Hungary. They came by coach which was waiting till end of the game to take them back. His wife together with their daughter often visited the laboratory to be hostesses of little parties, but they also took part in the laboratory work of extracting Vitamin C from paprika.

ABOUT SECONDARY EDUCATION AND PHYSICAL TRAINING

The sport-favouring scientist was invited very soon after his coming to SZEGED to deliver a lecture on "Physical Training of School Youth" at the National Congress to be held in SZEGED on 22nd of November 1930.[11] The lecture offered an early reflection of Szent-Györgyi's ideas on education.

Associating physical training with former and actual school systems he said:

> "... University, as every school can do things with students, can teach and educate them. The concept in most European universities is that they are merely for teaching and not for educating. In this case, the only aim is to comprise the content of 100 or 200 kilograms of books in the head of students during their graduation ... The two ancient English universities, Oxford and Cambridge, are against this concept. They - not regarding their scientific research - are not only teaching but educating as well. Their secret is that they educate young people, to be human beings and not sour, secluded philosopters. Sport is one of the most important means in their work, which does not oppress the body through the sense, but opens the spirit through the body - thus sport is the best way of education of body as well as that of spirit. Students sent by schools to our University - might be as talented as possible - are, with few exceptions, completely inapt not only for scientific training but also for any higher education. Every genuineness or interest have been eradicated by the 12-year long mugging and flurrying. New spheres have to be given to sports in the new education systems, so as to educate body and spirit within ..."

Sport teachers received the lecture of the Professor with great applause and as a final conclusion accepted the submitted proposal.

> "National Congress on Physical Education declares that physical education - as most efficient tool of mental and spiritual education - has to take its place in the whole range of education without placing more burden, but by reducing time of teaching and learning."

Great storm was stirred by the lecture as well as by the declaration in the circle of offended teachers. They threatened with counter-declarations to be published in right-wing newspapers.

> "Starting from this offence, secondary school teachers are not satisfied with one step of retorsion, but wanted to put an end to these kinds of groundless and offending attacks. Those warned thereby must not forget what a vast moral power is given to teachers, who live with this power to sweep away the carriers of accusations, who feel to have rights to rub their muddy shoes to the white gowns of Hungarian academics."[12]

Szent-Györgyi, the 37 years old professor was not frightened by that threatens. There were other occasions when he talked about the shortcomings of Hungarian education

system. He sharply withstood Minister Hóman's contra-selection oriented reform project of secondary education. On Faculty session held on 26th January 1934 he announced that the Ministry of Religion and Education wanted to restrict university admission of students graduated at certain kinds of secondary schools.

> "... As long as secondary school education does not concentrate at developing the individual mental- and spiritual capacity of students, but the main target is stuffing the head of students with data, and the ideas of life and university do not coincide - this restriction is not desirable."

He declared his ideas in several essays and lectures. Especially during his Rectorship, in his inaugural speech and interviews. His principle was that school was not to serve abstract educational ideas but to educate useful, healthy and happy people. Acquiring profession knowledge is not enough, since it is ineffective, what is more harmful, without certain mental-, spiritual-, moral and individual qualities.

> "... A secondary school leaving 18-year-old boy is apparently tired, indifferent, and a 25-year old one entering the life is dreaming of a post with pension, but without any personal responsibility. There must be something fundamentally wrong here... Our sons enter University with a huge ballast of excessive, irrational knowledge. I am not going to offend secondary school teachers who are my colleagues and brothers. I have to tell, however, these serious consequences are caused by the present educational system, which is antagonistic with our national characteristics and adversary to the elemental requirements of human and mental hygiene. Indifference was the cause that the deficient system introduced by the Bach era impelled our most important national element, education of our children in the present state. University is not free of the shortcomings of secondary education either."[13]

He summed up his views later, in 1946 as President of the Committee for National Public Education: "... There could be much talked about the school, but here I would focus at the most important item: school must educate children for democratic ideas, social and human sympathy, simple rule of human coexistence and for respect of our Republic not in letters and but also in practice within the community of schools."[14]

His views on sport and his permanent contact with sport shows us a modern scientist.

He used to be a lively child. Though his family background - the several generations long tradition of the scholar Lenhossék family - directed the interest of the child in spiritual direction, his real element was the motion. Fortunately, he spent his early childhood in Kis-kér mansion, where he was always in close contact with nature. Here he got familiar with his favourite sports, riding and running. In his secondary school age he organised an teetotaller group at school. At that time beside running he pursued speed-skating competitively. 1937 record book of Budapest Skating Club remembers the Nobel Prize awarded scientist as a successful competitor. We can learn about his successes from his sport partners. He was the first at the Highschool Competitions in Kolozsvár in 1912. Nobel prize made it possible to pursue his favourite sport, riding. He also liked water sports. There was a boat-house near his quarters and he went to swim or paddle there everyday. When he could he participated in the Balaton yacht races in summers. He regularly went to ski tours

with his family or colleagues. He loved touring and going out to far distances, sleeping in tent, which was rather unusual in university circles at that time.

He passed test in glider in A, B and C categories in 1940. A test for pilots in 1941, and sport-pilot test in 1942.[15]

His love for sports also manifested when he joined sport life of the University. During his Rectorship he claimed the sport-ground in square Szukováthy for the University and he got it from the Army.[16] He was President of the University Committee for Physical Education and Professor President of the University Athletic Club of Szeged (SZEAC) in 1940. He resigned that posts only after 1942, when a right-wing press campaign was launched against him.

ABOUT UNIVERSITY EDUCATION

Views of Albert Szent-Györgyi on university education express the thoughts of a scientist, tutor and friend of the youth.

The young professor coming home after ten years long experience in Western countries was not familiar with local conditions, his memories and experience were attached to the six years spent in Cambridge. He was working at an elite University of the huge Empire of the United Kingdom, where the would be leading strata of the country were educated. There he met children of rich families of his age who did not need to worry about financial problems and but could be preparing for their future career in safety.

Shortly after his home-coming, in his lecture of 22nd November 1930 at the National Congress on Physical Education, he recalled his memories from Cambridge. He saw the tired faces of students and the complete lack of optimism. His comparison was anachronistic even if he was led by intentions of improvement.

He did not mean to break with his memories of Cambridge, but getting familiar with Hungarian conditions and adjusting his ideas to it after a few years, he had a significant role in the reform of university education and that little could be realized of his proposals could be attributed to the political and economic situation of the age.

Objectives, form, content and way of university education generally follows the demand of the actual society. Scholastic, medieval university was created by the feudal era. Capitalism, first in France, then in Anglo-Saxon countries fundamentally changed the function of universities. According to the actual need of society a professional education came about instead of the previous education of academics of borderlined knowledge. Another requirement was that universities educate professionals with theoretical knowledge so as to further develop their scientific fields.

Old university education offered a degree but not a diploma. Its main characteristics was wide range autonomy, free cultivation of science and free dissemination of theories.

That scholastic university was greatly influenced by German idealistic social sciences, which regarded university as a source of culture and realm of science, where people go for science itself. German conception on role of universities had great influence on Hungarian universities.

Their orientation was hindered by the lack of knowledge about French or Anglo-Saxon medical education. French medical education, Ecole Normale Superieur, associates medical education with practical training at the hospitals. Theoretical basis is provided by university of science, but the students from the first year visit hospitals having to be familiar from medical care to differential diagnostics. Basic form of English practical medical training is at sickbed in small groups in ambulances and laboratories.

University education in Hungary followed the German pattern for several centuries. The requirement of educating professionals directed training into a practical direction only from the end of 20s. Reform of medical education seemed to be inevitable and generated a wide range debate at national symposia, and in the Hungarian Medical Journal (Orvosi Hetilap) dividing the professionals into two groups: those following the aristocratic German traditions and those proposing the English-French practice oriented training. Medical Faculty of SZEGED encouraged strengthening of practice seeking at the same time the ways of scientific training. In SZEGED Albert Szent-Györgyi represented the principle. He said in his lecture held on the 300th Anniversary of Péter Pázmány Medical University of Budapest:

> "... Majority of students at a Medical University prepare to be physicians therefore, Medical University education must accommodate to the claims of general practicioners. An important duty of university is to prepare students for practice as well as for research and scientific activities ..."[17]

Similar ideas were expressed in his article written on the reform of medical training. Medical education can be successful only "... if training accommodates to the actual claims of physicians and does not force them to acquire excessive knowledge to be a physicist or chemist. Physicians need less data but more knowledge in natural sciences."[18]

In his lecture at the National Congress on Higher Education of Natural Sciences between 10-16 December 1936, he talked about education and laboratory work in university training. He stressed that changes in natural sciences urged changes in university education.

> "Immense progress in natural sciences is an important fact in our age. Natural science, which was a vocation or even entertainment of the few before the discovery of Roentgen ray in 1895, has an important role today: it provides means of living for millions. That shows a new guide-line for universities. While in older times students sought science at universities, today majority of them want to obtain a profession and to be a useful member of society."[19]

There was a great dispute about the practice oriented Anglo-Saxon education, and a strong opposition was evoked in the representatives of ruling strata. Gyula Korniss, on behalf of the official educational affairs, delivered a lecture entitled "Major Concepts of University Education", which attacked both Anglo-Saxon and Soviet types of university education. He stated, university education had lost grounds through having lost its religious background and democratization, which might lead to intellectual "pauperism".

Those representing the trend of practical training lost at that time, but requirements of realities confirmed them later.

Though Szent-Györgyi emphasized the necessicity of practical training, he also stressed other objectives of university, as science and research. József Ferenc University of Szeged had paramount results in this field. With the new clinics and modern preclinical departments - by the support of Rothermere and Rockefeller Foundations - a grant of USD 119 and further regular supports were warranted for

the university departments. As prescribed by the Foundation, a Committee for Research of Natural Sciences was founded at the József Ferenc University of Szeged with the Presidency of Albert Szent-Györgyi and Paul Frőhlich appointed by Kunó Klebelsberg, Minister of Cultural Affairs on 16th June 1931. With this support could the team of Albert Szent-Györgyi accomplish their studies on biological oxidation and muscle function with the help of Professors István Rusznyák and Béla Purjesz in the field of internal medicine, and with that of Professors Miklós Jancsó and György Iványovics in experiments on mechanism of chemotherapeutic effects.

Professor Szent-Györgyi had possibility to realize his educational views during his Rectorship starting in 1940. In his inaugural speech avoiding traditions, he did not speak about his scientific results but about the threefold vocation of university:

> "... University has threefold vocation: the oldest one is to compile, disseminate and accumulate human knowledge. The second vocation is to educate scientists for the future who will carry on knowledge of their predecessors. A new one, but not less important task is to educate professionals provided with all means of knowledge ... Our University, here in Szeged, has another vocation, to be the spiritual centre of the Hungarian Great Plain ..." (cf. Annex No. 2.).

He repeated his views about the role of University in his interview in Easter issue of New Times (Új Idők) in 1941:

> "... Major task of University for itself and for the society is to educate good professionals. Professional knowledge is worthless if it is not possessed by a healthy individual. Human approach is necessary in any kinds of professions. Our age puts professional knowledge above human qualities. Though these are the essence of everything ..."

In Journal of Szeged chemists, Phlogiston he noted in 1941:

> "... Primary task of University to educate professionals of open spirit and knowledge. In our developed and striated society today, professional knowledge is important, but it is really precious if it is based on wide humanitarian essence. "Homo unius liberis" is a sad and tragic figure of our age. Everybody graduated at a university has to convey love of culture and a comprehensive human culture of the Alma Mater to the society."

AGAINST CLOSING UP OF MEDICAL FACULTY

Serious economic crisis of 30s had negative influence not only on educational and scientific work of József Ferenc University of Szeged having had to reduce the anyway limited budget, but also the educational politics after Kunó Klebelsberg. His successor Hóman did not alter Minister Klebelsberg's original reform plans, but shifted right, with a politics of uniformization, centralization and increased control. Country universities were the first victims of this politics. Pécs was defended by the Church, Debrecen by the Secretary of State, but for Szeged the favourite of the former Minister Klebelsberg. Economic pressure reduced the number of Hungarian university departments from 398 to 328 in state budget of 1932-33. That meant that 135-137 departments could remaine in the country universities. The minister found three options: (i) to close up one university in the country (Szeged was first considered), (ii) to close up one faculty in each university in the country (Medical Faculty of Szeged), (iii) to reduce the number of faculties.

The news desperated and stirred up the university and citizens of Szeged. They knew that they did not have any political supporters as Debrecen or Pécs had.

Sessions of University Council and the Medical Faculty, youth demonstrations and general assembly at Town Hall together with series of articles, telegrams were protesting against the planned decision of the government. Dean of the Medical Faculty, Elemér Veress declared in the press:

> "... If Medical Faculty is transferred or closed up, numerous students of meagre means will not be able to continue or finish their studies ... Even political agitation would be justified, if higher politics mutilated the József Ferenc University of Szeged."[20]

A delegate of Medical Faculty of József Ferenc University of Szeged entrusted by Elemér Veress went to the Department of Szent-Györgyi to ask for his intervention.

> "... I can only advise you to go back and continue your important cultural mission having done so far. Closing up the Faculties of Medical or Natural Sciences is not possible, since Rockefeller Foundation contributed to furnishing of these Departments and Government warranted their maintenance. One side infringement of this agreement, apart from the obligation of repayment, would mean such a world-wide dispute which would challenge our credit and reliability. I, myself have got so much involved that I could not stay in Hungary if it happened."[21]

International reputation of Szent-Györgyi was frequently referred on during dispute on keeping Medical Faculty in Szeged. He was offered several faculties and posts, but after all, Medical Faculty remained in Szeged and it could be, not to a less extent, personally thanked to Szent-Györgyi.

DEAN AND PRODEAN

Beside his successful research, visiting lecture tours in Hungary and abroad, between 1934-1936, tasks of dean and prodean meant equally great obligations. On behalf of the Faculty, Béla Issekutz offered their support in his work. Further burden was his assignment for the head of Department of Organic and Pharmaceutical Chemistry, and the membership in State Board of Master of Pharmacy. He tried to do his best during that hard period. Medical Faculty was charged of overruling the Act of 1921/22 limiting proportion of Jewish students in 6 %. Anti-semitic riots and demonstrations occurred regularly. An easing measure was issued by Klebelsberg in September 1926 against numerus clausus, right-wing forces, however, launched further movements. In November 1930, students were beating Jewish students at József Ferenc University of Szeged, while Klebelsberg was negotiating with University leadership. Breakthrough of fascism started with the failure of consolidate Government of Bethlen. Szent-Györgyi continued examinations of students even at that time. He told, he had got one right answer - from a Jew. "You Gentlemen, had better study instead of demonstrating".[22]

As Dean he took rather strict measures so as to strengthen the discipline at the University. His note of 12th November 1934:

> "I turned to the students of our Faculty with a warning request to avoid absence of lectures. Nevertheless, students were absent from lectures of medical chemistry, surgery, ophthalmology and physiology on 12th November. The absence will be recorded and students will be warned in first instance. If absence will occur again colloquia will be closed up along with marks in record books, and benefits will be cancelled".[23]

Szent-Györgyi, who was devoted to freedom in studies and spoken up against "secondary school" methods, suggested several measures during demonstrations disturbing university discipline, so as to restore university order. In Faculty session held on 14th June 1935, he proposed introduction of a "black book" in which the violence of discipline at the University would be recorded.

"Violence" of university discipline sometimes came from bureaucratic measures. So as to save a month rent, students came later and asked for delay in enrollment. Szent-Györgyi solved the problem with individually deciding on tuition fees. It was also a routine that opening session of the Academic Year was weeks after the actual date, thus it became a mere formality. Szent-Györgyi suggested: "University Council should declare that lectures at the University start on the Monday following the opening session of the Academic Year".[24]

Nation-wide press and religious dispute was launched by the claim of Emericana[25] to place the Cross above the Hungarian Arms and "National Lord Prayer" as a token so as to demonstrate the Christian character of Hungarian educational institutions. Several right wing, mostly Catholic organizations joined that request. Opinion of Albert Szent-Györgyi as Prodean of the Faculty was important in several viewpoints:

"... I consider the matter in question in two aspects - as a fact itself, and as a part of the yearly renewing disturbances. ... Those speaking before me convinced that University Council is terrorised, and under that influence they did not talk about whether placing Cross serves the interests of the University, but they talk about what would happen if the proposal were not accepted.

... I, myself as a Protestant do not feel the to be Cross the symbol of faith, but as a token of counter reformation. Therefore, as a member of the Council I am against of putting up any symbol of a religional or political a fraction upon the decision of the Council...

I think, when Council has no right to decide in filling in post of even a demonstrator, I suppose it would be unnecessary to take such a responsibility."[26]

He was the Dean when the chime-clock of Dom square was prepared. According to original plans, József Kállay wood sculptor would have carved figures of the Rector, the four Deans, a janitor and 10 students of the university. One of the Deans would have been modelled after Albert Szent-Györgyi.

Designs of the clock figures were modified, figure of Rector was of Kunó Klebelsberg Minister, Deans were of the Professors of Kolozsvar from 1880s, and students of some outstanding figures of our literature, history as András Dugonics and István Vedres.[27]

THE EXPERIMENTING SCIENTIST

The young scientist continued his research on ascorbic acid started in Groeningen, in the basement of the Department of Physiology. For the first chemical analysis he could produce it from orange, cabbage and adrenal glands, but at a rather high price and in small quantities. The only proper source, adrenal gland was not available in Cambridge. Therefore, it was a great help of Professor August Krogh when he sent high amount of adrenal glands for him from Denmark, which was spoiled by the time it arrived, as wrote Szent-Györgyi in 1937 about the discovery of Vitamin C.[28]

Professor E. C. Kendall invited Szent-Györgyi to the United States, Rochester, on a grant of Mayo Foundation. There were huge slaughterhouses in Rochester and Albert Szent-Györgyi after processing several hundreds kilograms of adrenal glands, could isolate 25 grams ascorbic acid. He shared it with Professor W. N. Haworth, and both of them came to the conclusion that such a small amount was not enough for accomplishment of the necessary experiments. Szent-Györgyi had suspected from the very beginning that ascorbic acid was identical with Vitamin C, but his life of vicissitudes did not render him to conduct the long lasting experiments.

When in 1928 he was appointed professor in Szeged, and as a "favour of lot" he got a co-worker, J. L. Svirbely who had some experience in determination of Vitamin C, it became sure in November 1931 the his presumptions were right.

In his lecture ("Vitamin C, adrenalin and adrenal gland") delivered on the 18th March 1932 session of Royal Medical Society of Budapest, he declared: "... It is first stated here in public that hexuronic acid (ascorbic acid) and Vitamin C are identical."[29]

Though scientific interest turned towards ascorbic acid, no plant or fruit containing the substance in sufficient amount could be found. It was a matter of fortune, that getting to Szeged he found a plant having incredibly high amount of Vitamin C. Paprika, the typical product of Szeged Region, was in a serious crisis in the twenties, partly because of the success of paprika of Kalocsa and because of the "paprika trials" in Western Europe. Big blows were hit on butcheries having mixed too much of it in sausages. In Germany paprika was used for colouring and not as a spice. Mark Pick wrote a disappointed letter to Experimental Institute for Agriculture, while the Mayor of Szeged to the Medical Faculty of the University in which he asked for medical confirmation on the beneficial physiological, dietetic effect of "sweet paprika" produced in Szeged.

Paprika crisis jeopardized the whole agriculture of the town. In the local papers series of articles discussed the possibilities for saving paprika, when the lucky coincidence occurred, Szent-Györgyi discovered the high Vitamin C content of paprika. It was also a part of "the lucky coincidence" that Svirbely was working in Szeged at that time. The laboratory changed into a cutting, grinding and distilling plant. Co-workers, family members and cutting women were preparing paprika for processing in an instrument constructed according to the design of the Professor. In a very short time 3.5 kg crystalline substance could be produced at a relatively low cost.

"Mother Nature - because of some secret reasons - furnished Hungarian sweet paprika with the most amazing store of Vitamin C" - wrote Szent-Györgyi in the "Contemplations of a Biologist".

"... So, it can be attributed to Hungarian sweet paprika, - that Vitamin C got from the mystery into the reality of the relatively cheap synthetic products."[30]

Szent-Györgyi distributed the substance processed from natural source among his fellow co-workers engaged in similar project. His discovery made him known, and invitations came from all over the world. It had a great effect on the economy of Szeged as well. Vitamin C made sweet paprika of Szeged incredibly popular, and the sale increased from the annual 42 wagons to nearly 200. Foreign physicians came to Szeged to study Hungarian dishes prepared with paprika. The Professor was glad to be able to help the economic problems of the town.

Under name of Vitapric, a paprika paste was produced by Tin-Factory of Szeged, which later became the source of discovery of another Vitamin.

With laboratory tests started at the Clinic of Pediatrics by Professor Jenő Kramár, and at Clinic of Internal Medicine by Professor István Rusznyák, Lajos Armentanó, Aladár Bencsáth, they demonstrated that beside Vitamin C, there is another substance which in a certain type of haemophiliac diseases stops the increased permeability of blood vessel walls. Isolating the substance they found it to belong to the group of flavonoids and they gave name of Vitamin P.

A fortunate incident helped in the new discovery; several medical departments asked for ascorbic acid so as to find out its role in medication. Because of the actual lack of ascorbic acid, Szent-Györgyi recommended Vitapric produced from paprika. Soon after he sent ascorbic acid too. No effect could be observed in haemophiliac disease upon administration of crystalline ascorbic acid, while Vitapric was applied with success. Testing the two substances, the Professor concluded that in Vitapric and paprika, there must have been another Vitamin beside Vitamin C, with effect on certain haemophiliac diseases. Through experiments conducted with the substance isolated from Szeged sweet paprika, they arrived at the finding and application of a new Vitamin, which opened new potentials to Szeged. Szent-Györgyi prepared high amount of the substance in order to test the new Vitamin.

The thought arouse, as early as during his stay in Szeged, that understanding of biochemistry leads to problems of biophysics. These studies, however, were conducted in his research period after Szeged. In his studies in Szeged he recognized not only the significance of combustion processes in living organisms, but also that of Vitamins C and P and their application in medical practice.

His international reputation was signed by invitations and recognitions abroad. In 1933, he was elected corresponding member of Societee Philomatique (Paris) and member of Karl-Ludwig Akademy of Halle.

In 1934 he was invited lecturer of Harvard University (Boston, USA); from 1936 was member of National Committee for Education; in 1937 he was decorated with Hungarian Corvin Wrath and Medal. He became corresponding member of the Hungarian Academy of Sciences in 1934 and full member in 1937, the same year when he won the Nobel Prize.

What is the secret of an outstanding man?

How did a late maturing child become a world famous scientist?

Szent-Györgyi answered the questions:

> "... I see myself going impatiently to the laboratory every morning and my work does not stop when I leave in the afternoon. I continue thinking about my problems, and my brain probably is further working on them while I am sleeping, since the right answer generally comes either when I awake in the morning or in the middle of the night. ... It is very rare that any of my problems is solved with conscious thinking ... I like principal problems only, and I could characterize my research concept similarly as I started angling in Woods Hole always using oversized hooks. I was sure I would not catch anything, but I thought it was better not to catch a big fish than a small one ..."[31]

Return of "stone" comparison in his studies is also characteristic. Instead of theoretical speculations, he was always a man of observations, experience and practical experiments. Several times he wrote about Aristotle who stated, upon theoretical basis, that a big, heavy stone was falling faster than a small and lighter one. Through centuries, the speculative statement had been accepted without doubts, up to the time when Galileo Galilei went up to the top of the Tower of Pisa and dropped two stones of different sizes. Observations showed that both stones were falling at the same speed.

Beside his self-characterization, statements of his co-workers and disciples demonstrated his rich personality, crave and devotion for science, research methodology and managing virtues. These statements could fill a separate volume - some of them are depicted here:

Professor Ferenc Guba - his former colleague:

> "... Szent-Györgyi works with hypotheses, and generally formulates the questions to be answered strikingly simply. It is astonishing how he approaches phenomena having already studied. ... Principle of errors was always in the atmosphere of the laboratory: He who does nothing makes no mistakes or errors, ... His ever-green optimism, and enthusiasm kept going on all of us ..."[32]

Professor Dániel Bagdy said:

> "... Szent-Györgyi as a real scientist is not only a rich personality but also an abundant source for his co-workers. He is interested in every detail of research work and he himself wants to see observations. He has never covered his ideas or findings, never spared with his new thoughts and was never jealous of his co-workers ... Free atmosphere of creative, scientific work was always an important factor of the successful research in his laboratory ..."[33]

His former colleague, János Gergely who became University Professor in Boston wrote:

> "Recollections of a disciple would not be complete unless recalling a defining characteristics of Albert Szent-Györgyi's personality: the radiating warmth, love for everybody, for those having been his co-workers and they still feel this radiation which means for them a lot even in the distance of decades."[34]

CELEBRATION OF NOBEL PRIZE

Karolinska Institute of Stockholm (Sweden) on 28th October, 1937 recommended the Nobel Prize in Medicine for Professor Albert Szent-Györgyi at the József Ferenc University. Telegram on the decision reached Albert Szent-Györgyi through his friend, Aladár Beznák working at that time at the Department of Physiology of Karolinska Institute.

> "We wanted to let professor Szent-Györgyi know at once, but we did not know where he was staying, since at that time he was travelling all over Europe. First, we called his father-in-law, Károly Demény, retired under-secretary, who told that the Professor was in Hungary. Then I was put through to Bálint Hóman and right after to Professor Szent-Györgyi, who was really touched and his voice was trembling as he thanked the news."[35]

The news arrived at Szeged late in the evening and was spreading in a matter of moments arousing great enthusiasm in the town. József Szigethy had his concert at that time in Hotel Tisza with the presence of high society of Szeged. The news became known during the break and the second part of performance. Reporters of Szeged newspapers interviewed Albert Szent-Györgyi at his quarters in Rudolf square.

> "The telephone rang at half past nine today - said the Professor - Stockholm was calling and I was told that I had been recommended for Nobel Prize in Medical Sciences. I cannot express my happiness. Then several scientists and newspapers contacted me from Stockholm. ... You should write that sweet paprika of Szeged has an important part in the successful accomplishment of my research in this field ...
>
> I lived through perhaps the happiest moment of my life, since I know scientist may have only one moment in life like that. I do not know the details of decision, but I am sure that my results in research of Vitamin C had major share in it. I have been working on this problem for ten years, but I encountered several interesting other problems in the meantime. I have already been candidate for Nobel prize, but have not been found suitable so far. What is my future plan or future project? To work. The prize provides me further financial possibility to work which has paramount importance for me ..."[36]

Early morning on the next day, lot of people started to the Department of Medical Chemistry in Dom square to greet the Professor. University Council gave an extra holiday for students. Szent-Györgyi after a sleepless night because of telegrams, telephones and visits, started from his flat around nine o'clock, but his first way led to the coffin of Kunó Klebelsberg in the Cathedral of Dom square and only after he went to his Department, where he was waited by representatives of institutions to salute him.

Several hundreds of students were waiting him to arrive. Ovation took long time and Szent-Györgyi told the students:

> "... I cannot say anything now only thanks for your being here, and for your love I feel. For us teachers, I daresay it is more than the Nobel Prize itself ..."

Words of the professor were received with applause, and students sang the Anthem.

The Professor was talking with delegates of University and journalists only after his short speech to the students.

> "My first way led to the coffin of Klebelsberg, I may thank him for being in Hungary, because his personality attracted me back to this country. Since then I have meant to serve him and try to comply his expectations ..."[37]

University Council headed by József Gelei Rector went to his Department where he was greeted on that occasion:

> "We the members of the University Council have come to celebrate you, not only as a scientist but also as a friend, a good Hungarian and teacher of disciples. God may give you further strength and health to bear the joy of decoration and for the future scientific work so as to enrich our University, town of Szeged and our country."

Szent-Györgyi answered the greetings:

> "I am all the more astonished at this celebration, since I have not done anything but fulfilled my duties and satisfied my scientific curiosity. There is a certain selfishness even in a scientist when feels satisfaction and pleasure about decorations and respect of University Council, but only affection can cause a real pleasure which surrounds him. I sincerely thank for Rector Magnificus and the University Council the friendship and love they overwhelmed me."[38]

After that visit University Council had an extraordinary session in the flag decorated university building. At the session József Gelei Rector read his proposal.

In his remark István Rusznyák Dean of Medical Faculty stressed that Professor Szent-Györgyi is the first Hungarian scientist laureated with that high esteem. He declared his intention to make a proposal on the Faculty session to be held that afternoon to establish a medal so as to commemorate this remarkable event.

Dean of the Faculty of Mathematics and Natural Sciences, Pál Frőhlich announced the donation of Honorary Doctor Diploma of the University to Albert Szent-Györgyi."[39]

At the afternoon session of the Medical Faculty, with Albert Szent-Györgyi present, his results were recorded in the register of the Faculty and preparation of a commemorative medal and board was decided.

The session was closed with enthusiastic ovation of the faculty members.

Decision of the Faculty was soon realized. The life-size bronze-plaque, work of István Szent-Györgyi was prepared by January 1938 and put up on the wall of council room of Medical Faculty. The faculty ordered the reduced copy of the plaques.[40]

The Nobel Prize winner Professor was received also by Governor Miklós Horthy. He travelled by car to Budapest on 5th of November which caused a great disappointment to the people gathered at the Western Railway Station to greet him. He arrived at Hotel Britannia where he had his breakfast. Guests recognized him and greeted him with great respect. Szent-Györgyi drove first to the villa house of his father-in-law and then at 12 o'clock he went to the reception which lasted for 45 minutes. Army of photographers and reporters invaded the castle to see and take photo of the famous scientist. After the reception at the Governor, he went to Bálint Hóman Minister of Cultural Affairs, then he visited the widower of Kunó Klebelsberg and Professor Sándor Korányi. Next day he met the notabilities of Budapest and delivered a lecture on the Radio on 6th November. It was not the first time for him to be on the Radio, his first interview had been about "Vitamins and Life" and the other "New Role of the Hungarian Paprika", in July and October 1933.

He requested the interview on the Radio so as to respond to the hundreds of letters and telegrams. "If I would answer all the letters and telegrams, I would not have time for anything else in my life" he said. "Being at a loss I turned to the Manager of the Radio to allow me to the microphone so as to thank everybody for their sharing my joy over that high respect. I would like to embrace all my Hungarian kinsmen."

He told how he had got the news on the phone from Stockholm and that his phone had been ringing all night and people had been congratulating him. He then remembered Kunó Klebelsberg, about his students, colleagues and answering the questions of the reporter he briefly told the story of his. Finally, he was talking about the duties and objectives of science.

> "Scientists work for peace first of all. Results of their research or discoveries are used for destruction many times,thereby devastating just the things scientists were working for. I am fully convinced that idea of peace must win. I believe in it all the more, since my faith is that people areessentially good in every point of the world, nobody wants to kill the other, thus political tension of nowadays has not basis in the human soul. There is space and bread for every human being ... we should rather believe in the victory of love and construction than in hatred and destruction."[41]

Unfortunately, the scientist was wrong with his idea about the moral qualities of people, though it is undoubted that even a benevolent person starting from himself can be wrong.

He arrived back in Szeged on 7th November evening, and on Monday morning on 8th the usual work started at the Department of Medical Chemistry as if nothing had happened.

After a one-and-half week break his lecture was due at three o'clock but students started gathering well before. They decorated the desk of the Professor with white and yellow chrysanthemums. They felt it was their turn to celebrate the Professor.

Szent-Györgyi had learnt about the preparations and gave order forbidding the celebration. Nobel prize had been given for work and not for celebration.

On 21st January 1938, he gave a lecture in the Auditorium Maximum of Faculty of Art and Philology about the events connected with the Nobel Prize upon the request of Society of Hungarian Women with University and College Graduation. He reported on his experience in a witty, humorous speech for an audience of 700 people.

> "News were issued in Swedish papers that Szent-Györgyi was one of the candidates for Nobel Prize. They sent me a copy, and beside the article there was a large photo. The problem was that it was not me, a handsome face of a man was smiling in the photo, but it was not me. Phone rang at half past eight. I picked up the phone, I was really excited. It was not Stockholm it was my mother-in-law: she congratulated to the Nobel Prize. I thought she was joking. But she was not. After that one of my friends called from Stockholm and he also congratulated ... That was something different, I started to be happy. A couple of hours later minister Hóman congratulated and that time I was sure in the Nobel Prize. After all a Minister cannot make a joke in such serious a case."

He thanked the town for the sympathy and affection and closed his speech:

> "Feeling that ardour, my faith is stronger that human benevolence and peace will win over destruction and hatred, which now unfortunately is ruling the world."[42]

THE NOBEL PRIZE WINNER BOY SCOUT

New "discoveries" not known about him were made during talking about and celebrating the high esteem. It turned out among the other things, for example, that Szent-Györgyi had been a boy scout. Before the First World War he made "pilgrimage" on foot to the grave of Rákóczi in Kassa. He took part in a wandering camping thus knew well various parts and sights of our country. In the Gödöllő jamboree in 1933, already as a Professor he was staying for a few days he met boy scouts of Szeged. Later his circumstances prevented him to belong any boy scout groups or to take part in their lives.

Márton Máriaföldi director of boy scouts forwarded the question of his students of Gábor Klauzál Secondary Grammar School: "How can one become a Nobel Prize winner?" The Nobel Prize laureate scientist answered the question in the Journal of Hungarian Boy scouts.

"Every American boy is inspired in his work by the challenge to be the American President. The same is true for Nobel Prize. Everybody can get a Nobel Prize. Even primary school is not a requirement.

Here it is as it should be everywhere in life: not to see who you are what you have studied.

I can give the following pieces of advise for those who would like seriously be candidates for Nobel Prize:

(i) Never look what ***you*** *may get from life and from others, but what you* ***can give*** *and* ***do*** *for others. Find a place in life where you can be the most useful.*

(ii) While you have option, find the work which you enjoy. One makes a good job if he likes it. Work with zeal and love.

(iii) Do not work for reward and acknowledgement! The only reward of work is in itself. But only the really well done work gives pleasure and satisfaction.

(iv) Do not let yourself led off the straight way and your aims for tiny advantages.

(v) Do not be conceited if you are rewarded or acknowledged! Do not give up upon blows or failures, but try to draw conclusions and learn from misfortune and do it better in the future. Do not try to find causes of your failure in others. Generally, it is in ourselves. If you draw the proper conclusion, blow can be turned into a gain.

(vi) Respect others' opinion. If it is different from yours, presume that its motivation is just as true and honest as yours. Try to adjust

your thoughts to others' to find out-whether they may be right. Do not seek your right at any price, others may be right as well.

(vii) Do not regard your co-workers your subordinates even if theoretically they are.

(viii) Keep your body in order. You will be happy and work can be done well only with a perfectly functioning body. Give your body what it needs, nourish your spirit. One cannot work all the time.

(ix) Spirit needs refreshment, relaxation. Nature should be your friend in that purpose. Greatest pleasures of life as sunset, sunrise, song of birds etc. are all for nothing. Second rate pleasures are expensive. He who can be really happy, can work the best.

I do not promise that all those following that guide-line will get a Nobel Prize, but I can tell, if any of these points are neglected, you will surely win nothing."[43]

His wife was the commander of the Scout Group No 77 of girl students. The aim of that group was, upon the pattern of the English Samaritan Movement, to help those who reject life. Our country had a leading position in percent of suicides even at that time. The scout on duty went to the police everyday and got the name and address of the delinquents. Girls then went to see them either in hospital or in their homes. Their work was not only to give psychological relief but also to reveal causes. Thus they supported them and with connections tried to find job to the unemployed. If the person had neither home nor bread, they provided place in the scout-home until they found another solution.[44]

FREEMAN OF THE CITY

Not only university citizens, but the whole town received the news enthusiastically, that a scientist working in Szeged got Nobel Prize first in Hungary. In the square in front of the Town Hall and in the promenade, Szeged people were discussing the remarkable event. József Pálfy Mayor congratulated Albert Szent-Györgyi right after taking the news.[45]

Various plans, proposals were raised by Szeged people and authorities, how to bestow the scientist. The first thought was to confer the honour of freeman of the city on him. This act would not only serve the expression of respect, but also to strengthen his links to the town. Namely, there was a danger that the world famous scientist would not stay at the country József Ferenc University of Szeged.

Szent-Györgyi visited the Mayor of the town to thank him for his greeting letter and he contradicted the rumours. He said he felt Szeged his real home and he did not think of leaving the town where he found his place and had excellent possibilities for his scientific work. He emphasized that affection manifested on his award made his attachment to Szeged stronger.

György Imecs Lord Lieutenant of Csongrád County summoned a session on 30th October to discuss of giving decoration of freeman of town to Szent-Györgyi. To express their gratitude and respect, they had flags hoisted on the tower of the Town Hall.

The ceremonial session was held on 1st December 1937. Bell of the Town Hall was tolling while György Imecs announced the extraordinary event.

Szent-Györgyi was standing in front of the ceremonial platform where the presiding Lord Lieutenant greeted him:

> "Municipal Authority of Szeged, upon the proposal of the General Assembly offer Your Honour to be the freeman of the town as a token of our gratitude for your scientific discoveries, acquiring fame and glory to our town ..."

The Mayor presented the Diploma with a ceremonial address:

> "We wanted to be in time to present you this Diploma so that Your Honour can appear as a honorary freeman of our town in Stockholm to take Nobel Prize, feeling the spiritual presence of the whole town there ... So, please Professor Albert Szent-Györgyi Honorary Doctor and freeman of our town, "Albertus Magnus" of our scientific life take the grateful thanks of the whole town ..."

Szent-Györgyi took the Diploma with the following words:

> "I am deeply touched when taking this Diploma which places me to the possible highest rank of a citizen of the town. To be a freeman of a town, beside indicating appreciation, I presume is the utmost one can

> receive. I always thought that the highest respect one can reach is a respected grave. I got much more, affection and appreciation of a whole town ..."[46]

Diploma on freeman of the town was formulated by Vilmos Sz. Szigethy Master Archivist, and was drawn by Sándor Devics on pergamen.[47]

The town was seeking also another way to express acknowledgement. Building of a villa house for him was decided.

The decision met with wide agreement of Szeged citizens, all the more because Szent-Györgyi's staying in the town became uncertain. The CHINOIN Pharmaceutical Works offered a post of Director General at a 12,000 Pengős salary. University of Budapest also stressed that a suitable Institute had to be given to the Nobel Prize laureate scientist in Budapest.

József Gelei Rector in his address emphasising the concerns of the University and town, urged the construction of the house:

> "A scientist like Szent-Györgyi has an unprecedented value for the town and for the University.
>
> He has also great merits in the upheaval of economic life. It is doubtless that "victorious career" of Szeged paprika can be thanked to him. And if we consider that a Hungarian farmer gets 18 thousands Pengő income from one wagon paprika, and thus the whole country takes further 2 million Pengő profit from exporting 100 wagons, Szent-Györgyi has long time served the expenses of a house to be built for him ...[48]

Upon the decision of general assembly, the Lord Lieutenant, the Mayor and members of Upper House of the town travelled to Budapest to negotiate with Tihamér Fabinyi Minister of Financial Affairs and Bálint Hóman Minister of Cultural Affairs. Their proposal was to build the house at cost shared by the state and the town on a site donated by Szeged.

Bálint Hóman declared that the Government wished to ensure Szent-Györgyi's staying in Szeged and Hungary and they had plans for realization.

The delegation returned to Szeged with satisfactory feeling that the case was on its proper way. Nobody thought that the Klebelsberg-devotee Szent-Györgyi was not favoured by Hóman. Thus the promise remained promise and Szent-Györgyi bought a house at his own expenses in 20 Bethlen street, New Szeged.

A later proposal of Gábor Vágó sculptor to cast Szent-Györgyi's plaster bust into bronze, at a cost of 1,800 Pengős, was also refused due to financial difficulties.[49]

Formal and official celebrations finished with the presentation of Diploma. Gratitude and pride of Szeged citizens further followed his way. Enthusiastic celebrations, anecdotes, songs and stage improvisations showed his popularity.

On the week following the news on Nobel Prize, Albert Szent-Györgyi went to a concert of Philharmonics held in the Theatre. His box was richly decorated with beautiful flowers, wonderful chrysanthemums and dahlias showing the festivity of the occasion. Thunderous applause received his appearance. The whole programme greeted him, Rákóczi Marsh of Berlioz which also accompanied his taking Nobel Diploma later in Stockholm.[50]

PRESENTATION OF THE NOBEL PRIZE

Presentation of Nobel Prize was in Stockholm, on 10th December, 1939. From Hungary apart from the family, only the Hungarian Ambassador was present, but the whole country and first of all Szeged could witness the remarkable event and be together with them through radio transmission.

The Professor travelled there together with his wife. His daughter studying in Cambridge joined them in Stockholm. Swedish papers wrote about the Nobel Prize Winners well before the ceremonial presentation. Svenska Morgenbladed, a popular paper of Stockholm reported Szent-Györgyi's talk with Péter Matuska, the Hungarian Ambassador there. Swedish-Hungarian Society invited the Professor to deliver a lecture after taking over the Prize. The Manager of Hotel Carlton - as Vice President of the Society - offered them a luxurious apartment. Hungarians living in Sweden waited the first Hungarian Nobel Prize Winner with enthusiastic anticipation, and would have liked to keep them there for a while, but Szent-Györgyi had to travel to London and Switzerland.

Radio transmission started at eighteen hours. First the Swedish capital, then place of presentation of the prize, the wonderfully decorated Concert Hall of the Swedish Academy were introduced. The huge room was crowded. Numerous outstanding persons from all over the world and the elite of Swedish society were present. Trumpets signalled the start of celebration, the Royal Family took seat on the platform, and the scientists to be decorated were greeted by the King standing.

The Celebration was touching and impressive, as it turned out from the short radio transmission. The Hungarian radio speaker, in spite of the fifty minutes at disposal, was short of time. Background speeches, reading of the preliminary prepared material, took too much time. Thus little time was left for the report on the most interesting happenings. The reporter joined the transmission again, when the King presented the Prize to the two Winners in Medical Science. Hammersten Swedish Professor stepped on the platform and was connoting Szent-Györgyi's decoration in Swedish and shortly in English:

> "The new theories suggested by Szent-Györgyi opened a new sphere in chemistry. His research has elucidated a so far unknown process of catalysis. Series of his discoveries started in 1933, with thorough and conscientious work conducted in Szeged. His clear sight in science enabled him to distinguish facts from insignificant..."

After his speech, Szent-Györgyi rose and went up to the King and took the heavy Golden Medal, the Diploma and the envelop containing the cheque over. The audience greeted the Winner of the 1937 year Medical Nobel Prize with a stormy applause, and the King congratulated him with a handshake, at the music of Rákóczi March.

The reporter then was talking about Szeged, which would be "nicer than it used to be", remembering Kunó Klebelsberg who invited Szent-Györgyi to József Ferenc

University of Szeged, and that was how a Szeged citizen got the Prize on that unforgettable day. Rákóczi March was still being played when with a slight click the Stockholm transmission halted.

Celebration continued in the Golden Room of the Town Hall with a Banquet, and at 10 o'clock the Student Societies of Stockholm gave a party in the Blue Hall, where those present in the Banquet appeared.

On the occasion, Nobel Prize laureate Szent-Györgyi told a short speech in German on the 10th of December (cf. Annex No. 3), and a toast in English in the Banquet followed (cf. Annex No.4).

Besides deep humanity of his speeches, Szent-Györgyi's amiable personality captured the attraction of Swedish audience. In his lecture - a tradition for Nobel Prize Winners - he found an unpretentious way to present his scientific results. He talked about the history of his research in details, the role of Szeged sweet paprika and serendipity in the isolation of Vitamin C, but all along he was emphasizing the merits of his research team. His witty, jovial performance had a great success. Swedish papers unambiguously wrote that Albert Szent-Györgyi was the most popular of all and the speech evaluating his accomplishment, was the warmest. A sign of his popularity was when he was invited to crown "Fair Lucia". It is an old Swedish tradition to choose the most beautiful blond girl of the town, "Lucia, the Fair of the Night" on 13th of December. It is also a tradition - since presentation of Nobel Prizes coincides with Lucia-day - to invite the most popular Nobel Prize Winner Professor to give a precious necklace over. Earlier Pirandello and Mme Curie won that honour. The Feast was held in Restaurant Berns in the presence of famous guests. The orchestra was playing Rákóczi March on the arrival of Szent-Györgyi, and the manager greeted him in Hungarian. Beauty of Stockholm arrived at 11 o'clock and Szent-Györgyi handed the necklace over. To great pleasure of everybody there, he told a short speech in Swedish with excellent pronunciation.

The warmest reception in the series of invitations was given by Hungarians living in Sweden. The recently established Hungarian Embassy in Stockholm gave a Banquet on his honour. On the gala in Goteborg he told the following:

> "... one of the most important impacts of Nobel Prize is that it brings people living in far countries together. Stones upon which mutual understanding and world peace to be built are made up of friendships existing among individuals."[51]

AMONG THE "OLD BOYS" OF LONYAY STREET

Among Hungarian towns, Budapest was the only beside Szeged which might regarded the glory of Nobel Prize partly that of its own. Albert Szent-Györgyi was born in Budapest, finished his studies there up to his University graduation. His first scientific papers written as a student were published there, forecasting the later scientific success.

So it was natural, that beside the greetings of General Assembly of the Capital, his old schoolmates of Reformats' Secondary School in Lonyay street congratulated him on that occasion. His former director wrote the following:

> "... Teachers of Reformats' Secondary School of Budapest got to learn with the highest pleasure and justified proud, that you Professor had been awarded with possibly most distinguished decoration, Nobel Prize for your scientific achievements.
>
> Beside the wonderful feeling that a Hungarian man, a Calvinist scientist got this appreciation, we are particularly proud, since you Professor had been our student and we may write it in golden letters in our history ..."

The former schoolmates did not fail to congratulate him either.

Some depicts of their letters:

Dezső Loessl:

> "... I remember when 25 years ago, we were learning together, and I was an everyday guest in your flat in Raday Street. I would really have not thought you, our friend "Berci" would be such a famous scientist. I recall your beautiful mother as she came into our room and brought some snacks, and your brother, when once he went to see the flood in Óbuda by his new bicycle ..."

Sándor Mihály:

> "... I remember the time when we were at school and started an antialcoholist movement in the class. Thank you my friend for sowing the seed, planting the idea. Now I know that you had a mission as early as that time, and this earned reward has crowned your vocation..."

Béla Stéger:

> "... Students of the Reformats' Secondary School graduated in 1911, contacted me on having read the exhilarating news asking me to convey their best wishes and invite you to spend an evening with us sometime in December, when back from Sweden, and honour us with the possibility to congratulate you to that long time deserved decoration."

Students' Society of the Reformats' Secondary School of Budapest had an evening gathering every first week of the month in a reserved room of the Vaci street

Restaurant. There at "white table" the "old" students were talking and remembering the happy days of their youth.

On their meeting of 2nd March, 1938, only very few thought what an unforgettable experience would be expecting them.

On horseshoe shaped table Arms of Hungary was shaped and decorated with paprika The place of honour for Albert Szent-Györgyi was decorated with the date, 1911.

First Professor Zoltán Vámossy president of the Society addressed him:

> "... Let me greet you my dear friend, who was brought back by love and memories of youth to our circle. You got your first "provision" of science, free thinking unnoticed at our school. That school taught you not to get loose and never let go what you had seen. We are all happy to welcome you among us. Many thanks for what you have done and we ask you not to stop but advance further enhancing your success to the benefit of our mother land, nation and science."

Then Albert Szent-Györgyi rose:

> "... Dear Friends! Do not expect me to deliver an oratorical speech. I may have that honour now because have not had it for twenty years. There are careers to be made with speech. My career was different. Spirit imbibed among the walls of our school helped me in my work done with determined intentions.
>
> One can give only one has, and I give my warm affection to our teachers, students and to every brick of old our school.
>
> In secondary school, we remember the years in elementary school disdainfully. During struggle of life, the past loses some of its interest, it looks smaller in the distance of time, but one thing remains unbreakable - love. That conducts you and the crave for science absorbed at the old "frightening" school.
>
> I really cannot say, I was an eminent student at school. I never forget, that I "freely" translated word "Frauenzimmer" into Ladies room. Once in half of the term I got a mark four from Mr Török, teacher of natural history and chemistry. I was watching the postman for many days so as to snatch the record book with that "disgrace".
>
> Life reevaluates everything, but for love. And with this love let me greet my friend, Dezső Loessl.
>
> I do not feel ashamed to confess, I was the peacher in the fourth class. (Noisy protest) Our headmaster, Bálint Varga made me understand that the youth are on the verge of falling into final destruction. When I was peaching, I meant to save you from that final destruction.
>
> Then on a fine spring day, you, my friend Dezső, took me for a walk to Sváb Hill to beat me up so as to cure me out of my intolerable peaching. There was no beating, but you patiently explained, that preaching is not

a comradely virtue. Few weeks later Bálint Varga blamed me in front of the whole class as the most unreliable chap among you.

So, that was how I avoided final destruction; God bless you for it! And now I shall reproach you, because I cannot forgive you calling me Honourable Sir in your last letter. Had you been there, when I was reading it, you would have been beaten.

Dear Friends, thank you once again with all warmth and affection of my heart for receiving me here like that. I ask you to accept me your partner and friend in the future as well. God Bless You All!"

That get-together turned into a family celebration proving with its intimacy that besides all glory and greatness, Szent-Györgyi he remained a man, a true human being.[52]

HONORARY DOCTOR OF JÓZSEF FERENC UNIVERSITY OF SZEGED

On the news of presentation of Nobel Prize, the University Council on its session of 29th October, 1937, decided to confer Honorary Doctor degree of the Faculty of Natural Sciences, on Albert Szent-Györgyi. The celebration took place in the main Hall of the University on 7th April, 1938 with distinguished guests present as Kálmán Szily representing the Government and the Ministry, and Gyula Glattfelder county-bishop.

On the celebration Pál Fröhlich Dean expounded the three prerequisites to become Honorary Doctor. With the degree the University wished either to reward results achieved in progress of science, outstanding activities exerted on the benefit of University, or on some extraordinary, festive occasion. It had never occurred that someone would have met all the three prerequisites. Albert Szent-Györgyi was the first who had all the three entitles to that degree.

Albert Szent-Györgyi in his address expressed his faith in progress and peace. Some depicts from his thoughts:

> "... Professor is, in the literary meaning of the word, who opens up his deepest conviction, seeks knowledge and truth, takes side at it without fear, regardless any outer power ... Does not sell himself to popular slogans of the day, substituting the ever true justice with ideas of different parties. ... University is the sanctuary and torch-bearer of knowledge the most precious human possession.
>
> It is the shrine of education and study, where there is no place for pushing parties and hatred. ... We have to live side by side, and if we wish peaceful coexistence, the essence is not to superimpose our race, parties of nationalities, but to prefer knowledge to ignorance, love to hatred, understanding to fighting, building to destruction ... Our patriotism ... is not confined to shouting slogans and or hating others."

The more intimate celebration later in the circle of his co-workers may have been more precious to Albert Szent-Györgyi, where he obtained "Paprika Diploma" expressing friendship and affection of his fellow professors. .

RESEARCH WORK AFTER

The second heroic period of the Department of Medical Chemistry can be dated to the beginning of the forties. Professor Szent-Györgyi felt having adequate research experience to start studies on a more complex biological process leading closer to the understanding of life, the biological and chemical mechanism of muscle contraction. His former co-worker Ilona Banga recollects the intriguing details in Medical Journal (Orvosi Hetilap 1940, 40). She recalls the response of the great scientist at observing the first artificially induced muscle contraction.

> "When I first saw them contract (actomyosin of two proteins) - the most ancient sign of life, motion produced in vitro - it was perhaps one of the most exciting moments of my life ..."[53]

His former co-worker Tamás Erdős, who became professor at the Laboratoire D'Enzymologie (Gif sur Yvette Cedex, France), remembers the first impressions.

> "... One day he was fiddling long with his microscope, then he asked me to look at in. In the visual field of the lens of small magnification, a transparent sausage was floating. He added a drop of solution to the preparate and the sausage was gradually shrinking. Twenty years later, he recalls the experiment, as the most thrilling moment in his research career. Today it is indisputable, that the experiment - contraction of actomyosin fiber in the presence of Magnesium, Potassium ions and ATP - opened up a new stage in muscle research."[54]

On 12th May, 1943 Albert Szent-Györgyi gave a 20 minute-long report on role of scientists in war and on his latest research work. "Hungarian Scientist in the War" was the title of the first part of his lecture about kinship linking the spirit of every real scientist in the world and encompassing them in one community. Regardless who is that scientist, where he lives, which race or nation he belongs to, he is a member of a community serving human progress with all knowledge and will. Naturally, it might occur when they were forced of different judgement.

That happened after the First World War, when they were evaluated and got a Department according which nation or community they belonged to. Szent-Györgyi emphasized in that context, not all are genuine scientists who have departments and teach. Sometimes the grand issue of science is more efficiently promoted by scientists working quietly in the frontier.

In the remaining part of his lecture he reported on research work they were conducting at the Department of Medical Chemistry of the University. The Professor and his excellent team was attempting to solve the problem of muscle contraction. "It is hundred-year now that scientists have been dealing with that problem theoretically" - said the Professor. He had also attempted a theoretical approach but realized, that nothing could be achieved with theories. He analysed muscle fibers chemically and finally he managed to produce artificial muscle fiber behaving just like live muscles themselves. He emphasized that he was working with an excellent team contributing markedly to attain successful results.[55]

It was at the Debrecen Session of István Tisza Scientific Society in December of 1943, where Albert Szent-Györgyi first reported on the results of his three-year-long research work.

> "It is the first time I give account in public about research work engrossing all my strength, days and nights during the past three years. Why do we physiologists and biochemists prefer muscles? Every biochemist and physiologist is "in love" with muscles. As a medical student I hated two things, vitamins and muscles.
>
> - It was necessary first of all - to take that machine apart with the possible highest devotion and modesty, and to get acquainted with its parts, physics, chemical composition and measure everything on it."

With his immense knowledge, he shed light on the essence of his research with simplicity and intelligibility. He recalled the whole route of his research, the numerous attempts and trials which finally brought success. About myosin the most important component of muscles, he disclosed facts that nobody had heard before.

> "During my scientific research, my greatest experience was when I managed to isolate fiber from muscle, which contracted under certain circumstances and could be observed under the microscope, that was actomyosin."[56]

Szent-Györgyi true to his personality shared the common results with his co-workers. In the 1942 year volume of "Studies from the Institute of Medical Chemistry" issued by his Department, Ilona Banga and Albert Szent-Györgyi presented results of their common studies. In his comments to the lectures of Kálmán Laki and Brunó F. Straub held at the Scientific Club of University he evaluated the research results of the young scientists, and emphasized the part of work done by Brunó F. Straub.

> "Brunó F. Straub has discovered a really important component of muscles. His studies cover a substantial part of the extensive studies conducted by the Department of Medical Chemistry. A major result of this work is that muscle was successfully disintegrated into its chemical components and assembled again so that they were able to move again. Such a way, we have approached understanding one of the most important and fundamental phenomena of life, motion."[57]

His annotation made in 1942, characteristically demonstrated his attitude towards young scientists.

> "There in the back, at one of the windows two gentlemen are working, that one there, Dr. Straub is my disciple. I feel nearly paternal proud if I am thinking about that his name is known world-wide. Last year he studied in Cambridge. At the same time I was in California, and I practically blushed, when someone started a lecture talking about him. That may have been a feeling when the favourite son's photo of a father is admired, and the photo is "actually" on him."[58]

Albert Szent-Györgyi continued his studies on muscle functions in Budapest then in the USA. In his later works, he several times referred to the results and circumstances of research work in Szeged.

RECTOR MAGNIFICUS

From the positive characteristics of the internationally acknowledged, Nobel Prize laureate scientist, love of the youth, man for the good of public best manifested during his Rectorship between 1940-1941.

During the open and sudden advance of fascism, in spite of the confrontation of his colleagues and the shrewd attack of the right-wing press, he attested, as the first Rector of the newly founded Miklós Horthy University, he would realize all objectives coming from his humanistic, democratic attitude, English experience and anti-fascist feelings. He wanted to create a new aura at the Szeged University, and with his personal respect he could reach results unthinkable for other professors of the University.

University youth was scattered in various organizations, according regional belonging, religious differences and political trends. A student could be the member of three different youth organizations at the same time.

Szent-Györgyi wanted to establish a uniform youth organization for University students.

He meant a University, which over the conveyance of knowledge, is a democratic Institution for education of future intellectuals.

These ideas were first formulated in his address delivered at his Honorary Doctor degree conferment celebration on 7th August, 1938. There he defined vocation of the University unambiguously, separating it from pushing party fightings and anti-semitic hatred.

In 1940 when elected Rector, he had possibility to realize his concepts, his democratic and humanitarian ideas. Separation and return of József Ferenc University of Sciences to Kolozsvár and reorganization of Miklós Horthy University of Sciences caused a lot of problems to the first Rector. He was not satisfied with the management of the "office", which itself alone beside his research and teaching work, was not an easy task either. At the inauguration session of the University in his chair-taking address he did not speak about his scientific work as it was tradition on such occasions, but about the new spirit of the University and about University students dearest for him (cf. Annex No. 2).

"The Rector of the University" he said in his interview with Southern Hungary (Délmagyarország) "has to organise and ensure the undisturbed function of the University.

My intention is that University - even in this turbulent time - can fulfil its vocation: dissemination of knowledge. Our University now really belongs to Szeged, therefore, I would like to make this relationship between the University and the town more close. ... The other change comes from the temporary close of the Faculty of Law. Number of students decreased, spaces have released, thus a possibility opened to create a real home for the students..."[59]

Szent-Györgyi contemplated about a student organization, about the establishment of new spirit at the University. Professors and students have to live and work together. Possibility has to be provided for students to find home there, and not only for studying but also for. They have to create an independent society so as to learn rules of coexistence, comeradely spirit, discipline and unselfish cooperation. To this end, University cannot be a lifeless complex of lecture rooms, libraries and laboratories but home for the university community, as a big family.

He declared in the paper Youth (Ifjuság) to the President of the Szeged Section of National Society of University and Highschool Students:

> "... I wish mentality of the youth changed; I do not want to see servile people around myself, but conscious young people who find their place in life and society. I support every intention serving the youth to become sentient, upright and cooperative."
>
> "... I put the question before establishing a student organization whether they are mature enough for a unity like that. Even if that were so, considering the disintegrating intentions of different organizations, students cannot be expected to solve this problem on their own strength. They need help, encouragement and it is the Rector who has to initiate..."[60]

Different political organizations had already attempted to establish student organization. They, however, being beyond the sphere of University, could not give the students what they needed, since due to their organizational set-up they departed students from their natural medium.

> "... I have always found my patriotic duty to do best what was to be done. When I became professor 12 years ago, my duty was to be a good professor. When I was elected Rector, my duty was to be a good Rector. Not only a little group of selected people come to the University, but students from all over the country. Therefore, our educational system needs a comprehensive reconsideration and revision ... I have a more distant vision about coming time, when there will not be destructive, national hatred, and we will keep together for the creation of a common and better future ..."[61]

Realization of idea for student organization, under the spiritual guidance of Szent-Györgyi was scornfully regarded by the right-wing policy, which by the theory of "divide et impera", though they had better belong to different political parties and serve individual political aims. A right-wing member of Parliament Jenő Szőllősy (a pharmacist in Makó) submitted his interpellation at the Parliament warning about the harmful influence of the Rector of Szeged University. A deputation of students asked the Rector to give support in establishing a student organization.

The new student organization of the University was established on 12th December at the meeting of university students, where beside the Rector speaking, respected professors were present: Sándor Sík, János Banner, Pál Greguss, Elemér Veress, János Batizfalvy, Jenő Kramár. The presence of professors had an inspiring effect on the inauguration session.

There, the Rector was talking about the development of new spirit first of all, which did not separate professor and student, and he regarded the presence of professors as the expression of readiness to cooperate.

> "... I want conscious students who get in the University leadership, can educate themselves responsible individuals ... They will have to be educated, straightforward and healthy persons, because the ages are to be blamed that not individuals but masses are educated who can be manipulated and used up with slogans ... This common idea must be far from the daily policies ... In the interest of unity, daily policy and slogans must be ruled out ... Students have right to intervene in matters of their own,... first of all in student social questions...[62]

A Committee has been appointed to work out the Regulation of the Student Union. Professors joined the Committee, and the University Council decided to wear the uniform cap of the Student Union to the ceremonial cloak.

After the inauguration Session, Albert Szent-Györgyi invited the students for a discussion about the most important issues of university teaching and education.

Students first were surprised that they might take actively part and speak up in the discussion in their own matters. Then the whole evening proved to be short to discuss all the problems.

Soon after the first Session of the Union, a delegate of Turul Group came to Szent-Györgyi and asked him to support their movement. Szent-Györgyi declared he could not do it since he wanted to establish an undivided student movement. The delegate took leave and with shouts "Forward Turul" they left the room. With that shout the head of Turul Group announced the fight against the attitude and movement theory of the Rector. Szent-Györgyi took the gloves thrown and was ready to fight against right-wing organizations. He declared at the student meeting of 1st December ."... my conviction is that every student of the University is first of all student and only after can be "turulist"."

Realization of Student Union had an enormous effect on students of other universities with similar objectives. Invited by the University of Pécs, Szent-Györgyi was talking about the concepts of Student Union at the enthusiastic applause of 600 students.

> "Self-consciousness of students has to be awaken, so as to fight for their places in the society, to stop pseudo-respect, because our country does not need submissive Hungarians, but upright, brave Hungarians ready to work."[63]

Szent-Györgyi spoke about the unity of movement at the meeting organized by the University Club of Szeged to an audience of all strata of the town. He got criticism, that the new student movement did not reflect its "Hungarian" and "Christian" being.

From the very beginning right-wing papers criticized the University Student Union (Szegedi Egyetemi Ifjúság, SZEI) - in Hungarian and Christian aspects - and its founder Albert Szent-Györgyi. The paper Independence (Függetlenség) openly wrote: Who learnt the proper interpretation of words not in the Rotary Club, knows that in the context as Professor Szent-Györgyi thinks, "Hungarian" does not mean hatred, and

"Christian" does not mean religious intolerance; only that "not Jewish"... It had better not formulate such a "Jewish" way ... in the Rotary Club of Szeged.[64]

Szent-Györgyi responded in his speech delivered to leading intellectuals at the meeting of Szeged University Club: "He who proclaims racial or national hatred is enemy of Hungary."

It was also said, that a man like Szent-Györgyi, who knew the whole world of culture and had been living in foreign countries for more than a decade, could not be a real patriot. Szent-Györgyi answered:

> "He who have always looked at the world from his piece of ground, cannot understand comprehensively the idea of home and nation... One can perhaps really prove patriotism, who has an open gate to the world, nevertheless stays here, in spite of all kinds of financial and other disadvantages."[65]

Series of right-wing attacks after the months of establishment of the Student Union strengthened, especially after the opening of the Student Club. On the 2nd floor of the building of the temporarily closed Faculty of Law got place the University Club with rooms for reading, table tennis, library. Students there could entertain, talk, or prepare for exams. In the former Dean's Office the Students' Interest Defence Office, Clerkship of the Canteen, University Choir and the Boy Scout Section of the University got room. But no place was given for the Turul Group.

There was no money, however, for proper furnishing of the Club. Thus happened that beside the 5 thousand Pengős donation of the town, Bernáth Back MP of Upper House contributed to the furnishing. Bernáth was reprimanded for both his generous attitude and Jewish origin.

Ceremonial inauguration of the Club was on 15th March, 1941 and Bernát Back was there among those invited, what was more he, together with other donators got serenade from the grateful students that night.

Several Jewish students also took part in the inauguration.

Right-wing papers launched attack against "Szeged Student Bar", "Vitamin Bar" and the Rector, who not only gave home for the youth, but he himself visited the Club with his daughter, and they were talking and playing games with the students.

> "The first Hungarian Student Bar opened in Szeged with liberal support and American games" squealed The Guard of Nation (Nemzetőr) and the same voice came from the Independence (Függetlenség) and other right-wing papers attacking English-American tendency of Szent-Györgyi and through Bernát Back, the "Jews."
>
> "From mere generosity Uncle Bernáth hoisted the proud flag of liberal resurrection in the town of Hungarian revival. What any other idea of a Christian, Hungarian young man would have today in 1941, than to sit up on a high American-style bar-stool before the shining, lacquered counter and to sip from the new "hatred-free"-Christian-nationality, financed by Bernát Back, B. Traub and Co., and the Rotary Club. Hello Boys! waves down to the Jewish-Hungarian Student Union without any

difference in their views. Look! here we are sitting on the top of the ideological unity from the benevolence of Uncle Bernát."[66]

The News (Új Hirek) of Hódmezővásárhely wrote: "the unselfish Jewish protection of Hungarian youth is very odd even, if it is denoted by the name of a Nobel Prize winner Scientist."[67] Left-wing papers naturally protected the initiation, as for example, Southern Hungary (Délmagyarország). Independent Hungary (Független Magyarország) in its article entitled "Do not offend Hungarians!" compared the "crusade-campaign" of the right-wing papers to the persecution of Béla Bartók, Ernő Dohnányi and Zsigmond Móricz.[68]

The youth of Szeged answered the accusations in their own paper in June of 1941. As it was written in one of the articles of the newly established paper Szeged Bridge (Szegedi Híd): Szeged Bridge was a symbol. The bridge links people, religious denominations, social strata and peoples. The bridge stands on its own fundament, it is destined to serve people, and it is not a spring-board or coach-tied horse of anybody. Szent-Györgyi wrote a longer article in the same issue about the Student Union: "... I have also had my reward: today there is a broader smile on faces of students, and they do not greet me with a humble respect any more but with affection."[69]

Evening Courier (Esti Kurir) noted with pleasure: "... students of Miklós Horthy University found their places at last, the place from where they had been dragged down with different political machinations during the past twenty years."[70]

There was not a day that Szent-Györgyi Rector or his students were not mentioned in any context in the press. The performance of Hamlet by the Dramatic Group established by university students, had perhaps the greatest echo in the press. "Our Hamlet is not a simple amateur play - declared Albert Szent-Györgyi Rector to the reporter of New Times (Új Idők). "It is about that a group of young persons decide to learn unselfishly, to work with a voluntary discipline. Common work done on the responsibility of own is the best "tutor" of the young spirit. That kind of work educate a man to be Man. ... I took side at the young, not only unselfishly but with sincere enthusiasm, and I gave every support so that they can fulfil that mission at the possibly highest standard, freshly and enthusiastically ... Students taking part in the performance of Hamlet would take such values in their spirits from the University what could not have been provided by any university subject."[71]

Szent-Györgyi and his daughter, together with Professor Sándor Sík were present at the rehearsals, and a really close contact came about between them and the students. On the day of the first night, 1st April, 1941, the Nobel Prize awarded Rector was so excited as if he had had to play the main cast of Hamlet. He was talking about nothing but the performance and his enthusiastic students, who had been preparing for that evening with feverish zeal. Door opened every moment, students were coming and each of them had some question or something special to ask. The Rector at that moment thought it most important to straighten out the problems. Károly Szász, Hamlet of the performance was scared to get hoarse after longer monologues and asked if his throat could be treated to prevent it. Szent-Györgyi immediately phoned to Professor József Treer, throat-specialist, who personally performed the requested treatment. Szent-Györgyi even thought about, that players might get hungry so he ordered some hot sausages with horse radish and oranges on his own account.

The really artistic Hamlet directed by the young István Horváth at the National Theatre of Szeged was a great success. Nobody cared that the box of the official representative of the State, Sándor Tukats was empty. Mayor Pálfy took seat there later to represent the town.

Every professor of the University was there headed by Albert Szent-Györgyi Rector, who with Sándor Sík the poet professor, one of the leaders of the cultural movements of the youth, were watching the excellent performance from the box of honour. Leaders of the public life of the town were also present, and the gallery was crowded with students.

Part of the audience took seat with the feeling to see some amateur performance. But as the first scenes of the play went on, that feeling diminished, applause thundered, which after all was not only for the students but for the nearly perfect artistic performance. Audience remained in its place after the last scene and was applauding the players before the safety curtain. Then turning towards the box of honour was long celebrating Albert Szent-Györgyi, who looked at the enthusiastic audience with a touched smile.

Upon the first night of Hamlet Szent-Györgyi wrote the following in the guiding leaflet of the Szeged Dramatic Group:

> "Those who saw these students gathering after tiresome days for preparation and rehearsals, who saw that kind, cheerful but serious spirit, devotion, patience, affection and skill as they repeated each event, the smallest scene several times up to perfection, had no doubt that our youth possess the qualities upon which a better, more righteous future can be built..."

Szeged Hamlet became a nationwide success, especially when after Szeged it was performed in Kolozsvár. Right-wing attacks started, when on 18th October, 1941, István Horváth director and Kata Tóth playing the role of Queen Gertrude committed suicide. Attacks aimed at the new spirits of the University, the cause of the tragedy, however, was fascism. The Jewish Act brought in 1941, put inevitable obstacles in the way of the two lovers, who not finding any other solution committed suicide.

Upon preliminary recommendation of Szent-Györgyi, brought the University Council the decision - after expiration of Szent-Györgyi's Rectorship - that students are not expected to address professors "Respected Sir". Professors can be addressed "professor", the deans "dean", and the Rector according to the old tradition in Latin, as "Magnifice Rector". The University with this gesture served as an example, so that the more and more extending, unjustified snobbery would stop in the public life.

Szent-Györgyi was attacked on the very next day after his leaving Rector's chair by New Generation of Szeged (Szegedi Új Nemzedék) reproaching him that in his address evaluating the events of previous Academic Year, he did not mention the reannection of the Southern Region to Hungary. His successor in the Rector's chair was Károly Kogutowicz, and the Professor President of the Student Union Sándor Koch. Reelection of the student leadership was scheduled on 26th October 1941, though the factual overtake occurred as early as in May 1941.[72]

CELEBRATION OF THE FIFTY YEARS OLD SCIENTIST

Last, pleasant memory of his staying in Szeged was the celebration of his fiftieth birthday. Modestly as ever he wanted to evade celebration, saying he would rather spend that anniversary, important in the life of everybody, with quiet work.

"I am not going to make any statements or show up, I want to work. My only wish is to work" he said.[73]

His colleagues and close co-workers wanted to congratulate their Professor, about whom there had been rumours for the past months that he would leave Szeged to be the Head of Biological Institute in Tihany. He avoided answering the questions put by the reporter of Southern Hungary (Délmagyarország), since nothing was sure at that time. It was said in Szeged, as a definite fact, that in best case he would not leave Szeged, but would be the head of two Departments. Therefore, in the Symposium organized in Tihany in August, many scientists participated from Szeged, his closest co-workers with Ilona Banga, Brunó F. Straub, Mihály Gerendás among them. It was obvious therefore, that the planned celebration of his fiftieth birthday carried the anxiety of a possible farewell.

Days before the Press wrote about the activities of Albert Szent-Györgyi, his brilliant scientific career and human qualities. Telegrams, and hundreds of congratulating letters arrived. Leading personalities of society and outstanding scientists greeted him from all over the world.

Youth of Szeged did not forget about him either, they sent him a basketful roses and carnations.

In the Laboratories of Department of Medical Chemistry the preparations started early morning. Flowers decorated his laboratory desk. A wreath made of snow-white roses surrounded the flasks, test tubes and his instruments. Ilona Banga shaped number "50" from dark red roses.

It was 10 o'clock when he turned round the corner by his car to Dom square. Freshly from the early morning exercise he started under the arcades towards his Department. He was touched realizing the celebration prepared with so much care, respect and affection. Then he took his common grey lab-coat, his green blinker and with his pipe in his mouth started to work as he did on any common days.

At five o'clock afternoon the work stopped for half an hour and he invited his co-workers for ice-coffee, cakes and so on. His daughter, Nelly was also present. On behalf of all of them, Brunó F. Straub greeted the 50 years old professor and presented their funny present specially prepared for this occasion.[74]

The Medical Faculty on its Session held on 24th September congratulated the Professor to his 50th Anniversary. Tamás Rávnay Dean told the ceremonial address, and expressed his best wishes on the occasion that Szent-Györgyi could spend his 50th birthday in health and complete strength for work, and could look back his career with satisfaction, since he had attained the respect of the whole world. On behalf of

the Faculty he expressed their gratitude that in spite of the invitations from abroad he remained faithful to the University.

Szent-Györgyi thanked the remembering and affection having surrounded him in good and vicissitudinous days alike. That affection kept him at home and enabled him to perform his research work.

IN THE BARRAGE OF RIGHT-WING ATTACKS

Press attacks and "anti" Szent-Györgyi measures of the new Rector in the Academic Year of 1940/41, worn out the nerves of the scientist, and in classic psychiatric sense he "escaped into illness". In 1942 and 1943 he got a longer exemption from lecturing two times, and was engaged only in research work. After his joining anti-fascist resistant movement, and especially after his mission to Istanbul, attacks against his person were increasing. After German occupation his personal freedom and life became endangered.

The new Rector, Károly Kogutowicz, started a vigorous "order making". Even the otherwise good willing Sándor Koch, who always felt sympathy for Szent-Györgyi, could not prevent it. One year achievements of the Student Union collapsed in a matter of days. In connection with the double suicide of 18th October, the Rector addressed a letter to the leadership of the Union on the very next day, in he which banned the function of the Theatre. The new leadership of the Union readily declared their attachment to the Szeged "idea and sense of vocation" and fighting for more noble Hungarian aims".

Gyula Nyikos student President of the Union demanded the exclusion of Serbian and Jewish students from the University. The "new idea" was indicated by the student demonstration of 17th March 1942, against the admission of three medical students of Jewish origin from the Southern Region. The student president also joined the demonstration. The Memorandum of 12 points submitted to the Rector was signed by all the comradely groups of the University, the president and student president of the Union taking stand at the anti-semitic movement. It was "proudly" announced in the June issue of the Szeged Bridge (Szegedi Híd), that the Union managed to have "numerus nullus iudeorum" introduced at the Szeged University.

Kogutowicz Rector at a student assembly held in 1942, openly attacked the Student Union's function and ideology during the rectorship of Albert Szent-Györgyi, and the Professor himself even as Rector and Nobel Prize laureate scientist. In other context as well he evoked an aversion of the Council with his arbitrary management.

Though fellow professors of Albert Szent-Györgyi were by no means akin in their ideological views, it was praiseworthy as they took stand uniformly against the new Rector representing the right-wing. Kogutowicz got into serious opposition with the University Council, and as a consequence he resigned. His resigning declaration of 28th June 1942, was answered by Bálint Hóman Minister of Cultural Affairs on 30th June. He turned against the University Council and did not accept the Rector's resignation. Kogutowicz in his letter of 6th June, with the copy of the Minister's letter announced taking over Rectorship again from 6th June. The consequence was an unprecedented event in the history of Hungarian Universities. The members of the Council present at that time gathered as soon as 7th of July and announced their resignation. They informed on their decision in telegram the Deans of the Medical and Philological Faculties and the Prodean of Mathematical Faculty being away on summer vacation, and asked for immediate reply. On the irregular session of 8th July

they unambiguously decided to resign from their dignities. They sent their resignation in writing to the Minister and the Rector:

> "Highly respected Minister, Dear Sir!
>
> On the 10th regular session of the Council of our University held on 23rd of June, our Rector Magnificus resigned, and since his cooperation with the Council became irresolvable, the members of Council accepted it unequivocally.
>
> Your predecessor in office did not accept his resignation. Thereby, members of the Council feel - entrusted though by the Faculties - they cannot take further responsibility for the management of the university issues, therefore, with high respect they announce their resignation.
>
> Receive, please, our sincere honour and respect.
>
> On 8th July, 1942. Albert Szent-Györgyi Prorector, József Baló Professor, Dean of the Medical Faculty, Árpád Kiss, Dean of the Faculty of Mathematical Sciences, János Banner, Prodean of the Faculty of Philology.
>
> Confirmed our decision through telegram: József Nagy Halassy Dean of the Faculty of Philology, Elemér Veres Prodean of the Medical Faculty, Pál Frőhlich Prodean of the Faculty of Mathematical Sciences."

That was the extraordinary situation, when the Rector had to undertake all responsibility and management without the help of any elected body.

The shrewdest attack against Szent-Györgyi was issued in the national socialist paper We are Alone (Egyedül Vagyunk). "We introduce you the real face of the Nobel Prize winner Professor, Albert Szent-Györgyi" "Education of a nation - from a Soviet-Russian study tour to the Rotarian Hamlet"[75]

As to the Nobel Prize - the paper wanted to be wiser than the Nobel Prize Committee - debated Szent-Györgyi's priority and the value of his discovery. It stressed: "Decoration with Nobel Prize recently has meant a certain ideological obligation." Disapproved that his speech had a "Freemason" sounding, and repeatedly emphasized "love". Praised pacifism ... Szent-Györgyi's speech with its humanitarian slogans was a charge against Hitler's Germany, demonstration against German people."

The article then aimed at the period of his Rectorship. Repeated the former charges against Bernát Back, "Vitamin Bar" and the spirit of the Student Club:

> "Covering his activities with his power as a Rector, openly worked as the fighter and agent of left-wing ideas. His aim was to destruct and eliminate right-wing nationalist youth organisations, first of all Turul Group. That is why he established the Szeged University Student Union (SZEI). ... On 15th March, 1941, on the afternoon of our great national holiday he opened the Club of the University Student Union which could compete even the most elegant Budapest places of that kind. Products of the liberal press were available there reflecting the aim of the new organization. ... The new Club was visited also by high number of Jewish students. The Student Club and the "Vitamin Bar" were

furnished from the liberal donations of Bernát Back Jewish mill owner, Manfréd Weiss factory, B. Traub & Co., Jewish Paper Trading, and similar other obscure donations in the rooms of Cameradeship Group of Verbőczy confiscated with his power as Rector. Here, there were card- and billiard-parties day-after-day and all these under the aegis of the Rector ..."

The article attacked the University professors of Szeged, and scornfully detailed the changes in the life of the University:

"He persuaded the University Council - the majority of its seven members were "sailing under his pirate flag" - to bring the ridiculous decision ... "members of the University Council should wear the cap of the Student Union". There are eleven University Professors at the Szeged University who are either Jews, Jewish origin, or have Jewish wife. ... He attempted to undermine, loosen the respect of professors with demagogic tricks. He was enthusiastically speaking at the meetings of Student Union that all differences ceased between professors and students. He introduced basket ball and he himself played the game together with the students. He organized "rag" balls where he himself appeared dressed as a ruffian and danced Lambeth-Walk with the ladies. Soviet pedagogy injected in the American infantilism got an idyllic home at the University during his Rectorship. Student loves and student tragedies were "blooming". ... The Theatre Group of the University Union had Ferenc Hont the bolshevist Jew in its background.. .

It is characteristic of his ideological views, that Hamlet was chosen from the plays of the world literature. ... This indecisive, unmanly young man is the symbol of the decadent, ideological malady ..."

Beside the criticism appearing today as appraisal, the article appreciates in the last paragraph. It appreciates Professor Károly Kogutowicz, "who in 1942, broke down the left-wing youth movement organized by Szent-Györgyi".

"I do not feel like speaking about Szent-Györgyi's deeds; I had a lot of problems because of him ... I had a diametrically opposite view against him. My hardest task was ... to create an atmosphere at the University which could comfort anxious Christian parents and the increasingly worried, good-intentional nationalist society about Szeged University. Majority of University students could be released of the spiritual control of professor Szent-Györgyi and led back into national direction. Liberal elements were swept out of the Student Organization and entered in the service of the right-wing...

When in the beginning of 1942 the University Council discussed under my chairmanship the proposal preliminary consulted with László Bárdossy Prime Minister, to confer Honorary Doctor's degree of our University on Marshal Mannerheim, a very uneasy incident happened. Szent-Györgyi furiously, and indignantly declared that he did not like recommendations with political tint, like that..."

On 26th April 1944 Szent-Györgyi wrote to Jenő Kramár, Rector of the University:

> "Magnifice Rector!
>
> I have got to learn that Professor Károly Kogutowicz launched a political attack and raised serious charges against me in his regular university lectures, ... An article has been published with the title of "Real Face of Nobel Prize awarded Albert Szent-Györgyi" A rather important part of this article is the statement of professor Kogutowicz, in which opposed to his official oath, he disclosed in one-sided presentation, secret material of University Council in details with my remarks among them..."

The report published in the paper engaged the attention of University Council even before the letter of Szent-Györgyi reached them.

> " It contains nonsenses ... It is about a professor of the University and it should be considered in pedagogical viewpoint, since the article means humiliation, destruction of a professor's respect. The Council expressed its reproach to Károly Kogutowicz disclosing obviously secret material of University Council ...
>
> On 29th April 1944, the Rector announced at the University Council, that Professor Kogutowicz had been verbally asked to submit a written report whether his "information" disclosed to University students squared with the facts, and the article had been prepared by his advise. Professor Kogutowicz gave answer in a confidential letter, which "could not be revealed at the University Council."

The Student Union also responded to the Editor of the "We are Alone" (Egyedül Vagyunk), but there was not a single word in the defence of Professor Szent-Györgyi, only protesting against the accusations concerning the Organization.

IN THE HUNGARIAN ANTI-FASCIST RESISTANCE MOVEMENT

A scientist involved in politics was a rare phenomenon in Hungary in the 30's and 40's. According to the contemporary public opinion, politics and science were incompatible disciplines, therefore a scientist was not supposed to get involved in the former. Szent-Györgyi was not inclined to politics and did not have a high opinion of politicians. But the events of the time forced him to act.

He wrote in his autobiography published in 1963:"...It was not me who wanted to be involved in politics, but it penetrated my life. When books were burnt and my Jewish friends were persecuted, I had to take side - "yes" or "No" - I said "No"."[76]

What was important,though, was not what he did. What mattered was that his name attracted others, even patriots far from the left- of the anti-fascist movement. He wrote two anti-war books in 1938, one in German and the other one in French, the latter together with Martin du Gard, who was awarded the Nobel Prize on the same occasion as Professor Szent-Györgyi. He gave shelter to refugees. Because of his democratic principles, he was opposed to fascism. He soon became one of the leaders of the resistance movement.

Their most important act before the German occupation was Szent-Györgyi's trip to Turkey. It was only possible to publish the real story of his secret negotiations there, when the English Foreign Office made the documents available for researchers. Only then was it apparent that his negotiations in Istanbul were far more important than previously supposed. The negotiations were not on behalf of the Government, but on behalf of the civil democratic opposition. Therefore, his mission could not be regarded as an effort to earn the goodwill of the Allied Forces so that the regime could survive in the changed international situation.

And that was one of the reasons why the British Government decided to take a new stand as regards to Hungary. British Foreign Office realized that the democratic opposition, i.e. a Government headed by Szent-Györgyi might be an acceptable alternative to the Kállay Government, the approaches of which had been rejected.

On 6th February 1943, upon the invitation of the University of Istanbul, Szent-Györgyi delivered a lecture entitled "The Chemistry of Life" in the Lecture Hall of the University there. Though there was a holiday at the University, students of all Faculties, as well as students from the Military College and majority of professors attended. More than a thousand students crowded into the Hall, designed for five hundred. After the amiable introduction from the Rector of the University, Szent-Györgyi spoke about his research, the importance and effects of Vitamin C.

Two days after Szent-Györgyi's arrival F. Roberts, from the British Foreign Office wrote the following memo:

> "We still receive these approaches with doubts, since they are obviously encouraged by the Hungarian Government. Several reassuring events

have taken place in Hungarian internal politics of late. A relatively strong democratic opposition has been formed. from the peasant- and socialist parties, as well as workers and intellectuals."

Eden added to the memo on 12th February:

> "I might happen that a turn of event will force us to change our attitude: should that be the case, we shall have to act in agreement with the USA and the Soviet Union. Perhaps it would be worth talking with them about this problem, which is only a question of tactics."

These few lines reflected a changed attitude on the part of the British towards Hungarian approaches for peace.

At the end of February 1943 a memorandum was drafted on the position of the British Government and sent on 10th March to Washington and Moscow with the request to cooperate.

The memo described the negotiations of Albert Szent-Györgyi in detail, stressing how it differed from previous attempts.

> "... Previous approaches were obviously encouraged by the Hungarian Government with the evident aim of securing its own position. His Majesty's Government does not see any advantage in receiving them with more readiness. On the other hand, Professor Szent-Györgyi, enjoys a certain freedom, and in many regards looks a suitable personality to be further contacted through secret channels."[77]

When negotiations started between Hitler and Horthy in the Castle of Klessheim near Salzburg on 17th April, 1943, Hitler presented evidence on the attempts of the Hungarian Government to break away, and also on the mission of Szent-Györgyi. The historian György Ránki gave an account of the details of this negotiation in his book titled "Reluctant Follower or the Last Follower", based on the notes German diplomats at a Conference at the Indiana University, Bloomington in 1981."[78]... The reprimands that Hitler voiced during his talks with Horthy regarding Hungary's efforts to make peace and Szent-Györgyi's negotiations were obtained from reliable sources enabling, Hitler to present a long series of complaints."[79]

The Istanbul mission also became known in Szeged partly through "hearsay", partly through and the already mentioned Kogutowicz speech. Since Hitler demanded from Horthy the extradition of Szent-Györgyi, eldermen of the city, especially Mayor Pálfy decided to put him under house arrest. Szeged did not want to betray its world famous son; house arrest served to save him from the clutches of the Gestapo. His freedom was limited only to the extent, that he could not leave Szeged without permission.

His house in Új-Szeged was "publicly" guarded by Hungarian police and secretly watched by the Gestapo. Since his personal safety was more and more under threat, he had to escape. Thus the period of illegality started in the spring of 1944.

He left his house on Easter of 1944, taking with him only his most important personal belongings. Not long after he had left his house was searched then a German officer moved in with his butler. They lived there for 2-3 months. Szent-Györgyi escaped to Szabadka (Subotica) and he stayed with the relatives of his wife who was born there.

They gave him shelter on their farm (1 kilometre from Horgos). The Professor spent a couple of months there, living and working together with farm labourers. He became good friends with a driver employed on the farm. Having a good ear for languages, after a month or two he could make himself understoond with the mostly Crotian workers. His wife, who moved to Budapest to their daughter's, visited him there twice. The police made several inquiries about him several with his relatives in Szabadka.

Nobody knew where he had been during the summer months. According to a family living next to his house in Szeged, he returned there once on 2nd July, to look for something in the house. Ilona Banga also hinted that they were together in the Department during a bombing raid. The Professor often visited the Department during the course of the summer to finish editing his research paper on muscles.[80] He left for Budapest in the first half of September leaving his Department in the care of Ilona Banga. He wrote letters to her without giving his own address. In his last letter he asked for the galley-proof of his manuscript.[81]

We know from his autobiography and from a Soviet officer patrol who moved the Professor's family to Szeged in 1945 that Szent-Györgyi found a flat in Vörösmarty street in Budapest, where he was living with his wife, disguised as a "seriously ill old gentleman and his nurse". There he could join again the anti-fascist political movement. He contacted Governor Miklós Horthy, who at that time was still in control of the situation in the country. Szent-Györgyi offered his assistance in diplomacy to prepare the was for the country to join the Allied Forces.

Finally Szent-Györgyi took refuge with his wife to the Swedish Embassy and under the name of Mr and Mrs Svensson they got Swedish passport. He sent the manuscript of his research paper on muscles to his friend Hugo Theorell, so that he could forward it to Acta Physiologica Scandinavica for publication (cf. Annex No. 5). Since he did not give his address, his Swedish friend acknowledged that he received with a telegram sent to Albert Szent-Györgyi c/o Swedish Embassy, Budapest. That was how the Gestapo found his hiding place. They organized a mob and enticed them to break into the Embassy the next day.. Szent-Györgyi, however, was not there any more because a German diplomat warned the Embassy that the Professor's hiding place had been discovered. So, Per Anger smuggled him out of the Embassy in the trunk of his car.

He was hiding at different places disguised with a long moustaches and beard, and with false papers as László Dunai clerk. He did not reveal his hiding place even to his friend, and partner in illegality Zoltán Bay.

Liberation Committee of the Hungarian National Uprising was founded in the second half of November. The Committee comprised of left-wing parties, illegal groups, the president of the trade unions and "a well known anti-German politician, who was not a socialist but his person and activity were highly esteemed even in Moscow."

The Liberation Committee issued a declaration to the Hungarian society, calling for resistance in all layers of society. In the middle of November they wrote a letter to Marshal Malinovsky and Foreign Minister Molotov and selected the members of a delegation. The Military High Command delegated Major Imre Radványi, and the other member was Géza Pénzes. Bajcsi-Zsilinszky recommended first Professor Zoltán Csűrös as the leader of the delegation, then contacting Szent-Györgyi, they decided on him.[111]

The plan was to take the letters which were translated into Russian and French and duly signed, by military flight across the front, leaving from Székesfehérvár airport on the 22nd November.[82] However, the arrest of several members of the Military High Command and Endre Bajcsi-Zsilinszky in the evening and night of 22nd November prevented their departure.

In the meantime Szent-Györgyi frequently changed his shelters. His last hiding place was the cellar of Countess Eszterházy in Városliget. Soviet groups were already across the road, so Gestapo agents and Hungarian Nazis could not get there. It was a dangerous place since it was being shelled by artillary, but it was still less dangerous than the German secret police. His wife with the whole family was staying in a flat in Vörösmarty street. When the city was liberated, he returned to his wife. "I hardly got there" he said "when a Russian major came ... He was appointed by Molotov to take me a safe place ..." The 12-member family was then taken to Szeged, but Szent-Györgyi and his wife were directed to Enying, to the Headquarters of Malinovsky.

IN THE LIBERATED COUNTRY

There was a great jubilation on the afternoon of 11th February, 1945 in the National Theatre of Szeged at the performance of Lehár's " The Realm of The Smile". In one of the first floor boxes appeared Professor Szent-Györgyi, whom nobody had known anything about for months, and about whom fantastic rumours had been circulating. The Professor's daughter Nelly and her husband György Libik, who was a mechanical engineer were, in the company of a young Russian officer. The audience filling the theatre did not immediately discover the interesting member of the audience, who was in the shaded back of the box. Before the performance started, János Baranyi greeted cordially the Professor and the Soviet Captain with him, who was appointed by Marshal Malinovsk to accompany the Professor. The audience greeted the Professor with great ovation and enthusiasm. Szent-Györgyi, who was deeply touched, thanked them, waving his hands.

During the intermission, a reporter of the local newspaper, "South of Hungary" (Délmagyarország) went to his box to interview him, and this is what Szent-Györgyi said:

> "I came to Szeged the day before yesterday. I had not left the town because I wanted to escape from the Russians, the people of Szeged knew it very well. I was on a summer "holiday", hunted down by the Gestapo. That is why I could not come back to Szeged. For several weeks I was hiding in Budapest, until the arrival of the Russian troops. I was in hiding, when I got the invitation of Marshal Malinovsky. So I was taken to the headquarters in a rather bad shape. For a while I was the guest of the marshal, and now that I have recovered, I came to see Szeged again.[83]

Apart from visiting his former Department, he took part in a session of the University Council, held on 11th February. He promised the Council he would intercede with Marshal Malinovsky for help so that professors of the University could move back from Budapest to Szeged. The Council asked the Marshal to provide covered military trucks for the purpose.

On 10th February 1945, Szent-Györgyi asked for an unpaid leave of absence through the Faculty of Medicine from the Ministry. Then at the University Council of 27th April he announced he had been appointed to a new position at the Péter Pázmány University of Sciences, which he had accepted. Béla Teleki Minister of Cultural Affairs informed the University about the appointment on 19th June 1945.

> "Hereby I inform the Council of the University of Sciences in Szeged that on 16th June 1945, the Prime Minister of Hungary, upon my recommendation,appointed Professor Albert Szent-Györgyi of Szeged University Head of the Department of Medical Chemistry at the Péter Pázmány University of Sciences. I ask the Council to exempt the above named Professor from any further services and functions at the University of Sciences in Szeged."

At the 3rd annual session of the Faculty of Natural Sciences, Professor Győző Bruckner claimed the laboratories used by Szent-Györgyi since September 1935 in the Department of Organic and Pharmaceutical Chemistry.

> "A new situation came about with the departure of Professor Albert Szent-Györgyi... Almost all the equipment and instruments of the Department of Medical Chemistry had been purchased with the support of the Rockefeller Foundation and the Research Committee of Natural Sciences (Szeged). The latter naturally approved the request of Szent-Györgyi's request so he might temporarily transfer the equipment to his new Department."[119]

Szent-Györgyi's next visit on 28th April was rather short. He took part in the meeting of University Council at noon, then visited his former Department and his family. At five p.m. he drove back to Budapest.

Béla Purjesz, Dean of the Medical Faculty informed people of Szeged through the local Press about Szent-Györgyi's announcement at the University Council:

"I have some bad news and some good news.

It is a loss for Szeged that Professor Albert Szent-Györgyi has been transferred to Budapest. He has accepted his new position and he will Head of the Department of Medical Chemistry. A well equipped Department will be at his disposal to carry out his research. Our concern now is to find a suitable successor.

He has to stay in Budapest, since he has been elected President of the National Committee of Education..."[84]

László Tóth Rector in his address of 24th December 1946 congratulated the Professor on the occasion of receiving an honour for his participation in the Hungarian resistance movement with special reference to the years Szent-Györgyi spent in Szeged.

Szent-Györgyi accepted his new appointment in Budapest for several obvious reasons. It was not the research facilities and scientific opportunities the were crucial in his decision. With his background in science and politics he became too important a man to be left in Szeged and he was needed to deal with problems on a more national scale in Budapest. He joined several cultural and scientific organizations, initiated new ones, and took an active role in public life.

MESSAGE FROM THE DISTANCE

Albert Szent-Györgyi was staying in Switzerland in the autumn of 1947 when news came about the arrest of Lajos Zilahy, his best friend and partner in the anti-fascist movement and post-war reconstruction. At that time it was obvious that the break between the anti-fascist Allied Powers of the 2nd World War was final. The "Cold war" created mutual mistrust. Those who had contacts with Western powers before and during the war like Szent-Györgyi were viewed with suspicion. They were suspected of working for the intelligence service of oneimperialist power or another. He knew about the atmosphere of mistrust and potential threats to his personal freedom. Therefore he did not return and decided to settle down in the United States. His letters written to the University of Budapest in 1948 and his request for leave of absence to continue his research all indicate that he intended to return to Hungary. He decided to stay in America for good, when as Head of the Laboratory of Institute for Muscle Research in Woods Hole he was able to carry on with his research work started in Szeged, on the biochemistry of muscle contraction. Then his interest gradually turned to submolecular fundaments of life processes. Based on his work, two new fields of science were founded, the submolecular biology and bioenergetics. His book "Bioenergetics" published in 1957 was a landmark in the field.[85]

In 1960 he started studying the thymus. His research aimed at understanding the regulatory system of cell function, and the ability to regulate and control cell division. This is how he arrived at cancer research, which was personally motivated: the two people dearest to his heart, his wife and daughter both died of cancer, leaving the scientist and three grandchilds behind.

One of the greatest potential dangers for our age, the invention of atom and hydrogen bombs, was threatening with another world war, actions were taken against its use. Szent-Györgyi joined every gesture of protest American scientists made against the atomic war. He was ready to oppose even fellow scientists if they did not take an antinuclear war stand.

On 13th January 1962 he delivered a rousing speech about the social responsibility of scientist at Harward University, and in the same month to the inhabitants of Falmouth about the atomic bomb, with the title "My Difficulties with the Atom". The latter was published in the Hungarian journal "Horizon" (Látóhatár).

In the meantime, together with his colleagues, among them László Együd he managed to produce a substance isolated from calf liver, which proved to be effective in animal experiments for the prevention and therapy of cancer. In 1972 American Science Foundation reported that his results have the potential of halting proliferation of cancerous cells. However, the continuation of the apparently successful experiments was prevented by financial problems.

> "The Vietnam war - he said in his letter taped on 30th May 1970[86] - is a tragedy not only for the whole world but first of all a tragedy for America, which is forced to spend money on this devastating, unreasonable war, thus withdrawing support from matters of national

interest, scientific research for example. Research grants have been cut back and I have been one of the victims.

The Foundation, having supported me generously so far, has decided to allocate only a fragment of the grants. Presumably, my name starting with 's' is rather close to the end of the alphabet and by the time they reached it, they had run out of money. Then I turned to another state foundation, compelled to function on a reduced budget, and they could only give me enough money to enable me to barely continue my work, not enough, however, to continue large scale projects like cancer research."

When The Vietnam war broke out, Szent-Györgyi was among those American scientists who spoke out most vocally against the war. He formulated his anti-war stand in newspaper articles and he recorded his "Hymn to Peace", which he sent to all the leading politicians of the world as an act of protest against this unhuman, cruel war. One copy was sent to Hungary, and the widower of the sculptor Béni Ferenczy allowed us to record it for our Szent-Györgyi Collection.

Szent-Györgyi's views on politics, on society and science are summed up in his trilogy against the Vietnam War: The Crazy Ape in 1970, What Next in 1971 and The Scientific Citizen in 1972.

His criticism of American society and the publication of his works inspired by his pacifism were to have a decisive influence on his life and his research. State subsidy of his work was first reduced then completely withdrawn which he criticised publicly.

After Franklin and Tamara Salisbury established the National Cancer Research Foundation, together with Szent-Györgyi they worked out a concept, which they called "Laboratory without of Walls", and it became an exchange network of scientific information. Each scientist supported by the Foundation worked in a special area of research in different parts of the world, and their results were evaluated at Woods Hole. Scientists who participated worked in 14 different countries, in sixty institutes. And among them was rofessor László Muszbek of Debrecen (Hungary).

Ever since his "Hymn to Peace" appeared, his name started to feature in the Hungarian press, and more and more was written about him in the 70's. The Professor was corresponding only with his former colleagues and friends up to the seventies always, considering himself a Hungarian and citizen of Szeged.

Rector of Szeged University invited him to the 50th Anniversary of the University's foundation and at that time he was not in the position of accepting it.

Laboratory of the Institute for Muscle Research

22nd July, 1971.

Magnifice Rector,

With great appreciation I received Your Magnificency's invitation to the celebration of the 50th Anniversary of the University. It was an honour to learn that the University still remembers me as its Professor. I really feel I belong there. Unfortunately, my 77 years of age and numerous obligations do not allow me to accept the invitation. I beg your

Magnificence not to take it as a sign of indifference. Having an option, I would be with great pleasure among those celebrating there.

Sincerely yours, Albert Szent-Györgyi[87]

His only contact with Hungary was his correspondence with his former colleagues in Szeged. In his letters, apart from problems, he gave account of his work in America, he wrote about his family, his plans, happy and sad moments in his life. He always conveyed the feeling of wanting to come home "... it is pity that America is so far away." - but as he grew older, the prospect of undertaking the tiring trip became more and more remote. During the period of forty years, he came home only twice; in 1973, when received a Honorary Doctorate from the University, and on 7th January 1978 as member of the delegate bringing home the Hungarian Royal Crown.

HONORIS CAUSA DOCTOR
OF THE MEDICAL UNIVERSITY OF SZEGED

The University Council of the Medical University of Szeged at a session held on 5th October 1973, upon the recommendation of the Medical Faculty decided to confer Honoris Causa Doctor's Degree on the Nobel Prize laureate Professor Albert Szent-Györgyi, as an acknowledgement of his outstanding results in medical science and to strengthen his links with the University of Szeged.

Albert Szent-Györgyi originally came to Szeged to take part in the inauguration Ceremony of the Biological Research Centre of the Hungarian Academy of Sciences held on 11th October. He stayed with his former colleague István Huszák. The Hungarian Television made an interview with the professor.[88]

The *Honoris Causa* celebration took place on 12th October. The Ceremonial Hall of the University was full of his well-wishers, professors of the universities and colleges of Szeged, his former colleagues, friends, students and hundreds gathered around the building. The representatives of the Government and several foreign Universities were also present.

Professor György Berencsi entered the Hall, accompanied by the Vice Rector for Educational Affairs and passed by the lined students. Ceremony unfolded according to old University traditions: members of the University Council arrived, then the National Anthem was played. Then György Berencsi greeted those present and read out the decision of the University Council. In his speech he summed up Albert Szent-Györgyi's scientific achievements and human merits, which had brought recognition to the University as well.

> "Let us place the flowers of our respect and pride next to those of the whole world. Here we have again with us the much loved and respected former professor of our University, the Nobel Prize Award winner Albert Szent-Györgyi, and it is our great pleasure and honour to confer Honoris Causa degree on him. He achieved outstanding results in biochemical research, he clarified and explained the fundamental problems of life, cell respiration, motion of muscles, the nature of cancerous cells, thereby earning fame for himself, his university and his country."

The presiding Vice Rector for Educational Affairs then asked Ferenc Guba the Dean of the Medical Faculty to describe to all those gathered the biography and scientific career of Albert Szent-Györgyi.

After this, the Vice Rector for Educational Affairs, Deans of the Medical and Pharmaceutical Faculties went up to Professor Szent-Györgyi and with the words *"Doctorem honoris Cause pronuntio"* György Berencsi handed over the *Honoris Cause Diploma* in a dark red leather case and then shaking hands with him, said *"Honoris Cause* diszdoktorrá fogadom" (hereby I confer on you the Honoris Causa Degree).

The two Deans did the same. Then two students - a young man and woman, presented a bouquet of red carnations to Szent-Györgyi, accompanied by the applause of all those present.

> "I am touched and somewhat embarrassed accepting this Diploma as a sign of appreciation and affection. I do not know how I deserved this honour, since as a citizen I have never done more than meeting my obligations, and as a scientist I only satisfied my own curiosity. I am a *Honoris Causa doctor* of several Universities, but this one here is especially precious for me because it has been awarded in my mother country and by my university (cf. Annex No 6).

Now I have no house at the river Tisza. My house stands at another big stretch of water, I work in another country, and the results of my efforts belong to the whole mankind, but I have to confess, I still consider myself Hungarian and I feel myself belong to this Country. I came back to my country with pleasure, to see places again, where I worked and lived again; to meet my former colleagues and friends, and to see what have become of my students. I had, however, something else in mind too. I wanted to re-charge my emotional batteries. A scientist is unable to work unless he feels that the people around him in the society he lives in are interested in his work and appreciate it. This is what inspires me too at eighty years of age to continue my work. I wish to strengthen my ties to Hungary and Szeged University. I have seen and experienced that science is so well respected and loved in this country, there is such an appreciation of common treasures that I can reasonably expect Hungarian science to produce wonderful results. I wish you this from my heart."[89]

After the closing words of the Vice Rector the new *Honoris Causa Doctor*, accompanied by the guests left the hall at the sounds of "Gaudeamus igitur".

Szent-Györgyi wrote in the Album of the University:

> "What made this occasion special was not the ceremony surrounding it but the warm affection, which is the most precious human quality. This Honoris Causa celebration is one of the most remarkable events of my much troubled life, because I have never experienced so much love, respect and warmth."

* * *

After the death of Albert Szent-Györgyi on 22nd October 1986. an earlier initiation, to name the University after Albert Szent-Györgyi the world famous former Professor of the University, was realized. On 10-11th of December 1987 and his bust was inaugurated by the Town Council of Szeged in the Pantheon of immortals of Hungary, and the University therewithal has been named **Albert Szent-Györgyi Medical University.**[90,91]

CHRONOLOGICAL ORDER

1893 September 16.	Was born in Budapest. First name Albert, given name Imre. Father: Miklós, Mother, Jozefa Lenhossék. Spent his childhood in Kiskér close to Buják.
1904-1911	Student of Reformats' Secondary School in Lonyay Str. Budapest.
Summer of 1910	Accompanies his brother Paul on his concert tour in Italy (Venice, Florence, Rome, Naples).
1911	Takes maturity examination and enrolls to the Medical Faculty of Péter Pázmány University of Budapest.
1914	Interrupts his studies, enters military service first in the Military Hospital of Miskolc.
1915	As a volunteer of the 65th Infantry Regiment gets to the Russian front.
1917	Injury, Silver Medal for Courage, sick-leave, finishes his studies, graduates with Doctor's Diploma.
1917 September 19	Marries Kornélia Demény.
1918	After his recovery he is sent to the Italian front, soon after gets discharged. Assistant professor of Professor Géza Mansfeld at the University of Pozsony. His daughter Nelly was born.
1919	Works for a short time in Budapest, then at the University of Prague at the Department of A. Tsermak.
1919-1920	Works at the Department of Michaelis in Berlin.
1921-1922	At the Tropenhygienische Institut, Hamburg.
1922-1923	Assistant Professor of Storm van Leuwen at the Department of Pharmacology, in Leiden.

1923-1926	Honorary Professor of H.J. Hamburger in Groningen.
(1924)	His experiments settled the scientific dispute of O. Warburg and H. Wieland.
1926-1930	In the Laboratory of F.G. Hopkins in Cambridge (England) with Rockefeller Fellowship.
(1926-1927)	At the Mayo Clinic in Rochester (USA).
(1927)	Ph.D. Degree in Chemistry in Cambridge.
(1928)	Discovery of hexuronic acid.
1928 September 29	Elected Professor of József Ferenc University of Szeged, takes an Oath.
1928 October 1	Appointed Professor of József Ferenc University of Szeged. Gets two years leave of absence to finish his research abroad.
1930 September 26	Takes his Szeged post and moves there with his family.
1930 November 22	Lecture entitled "Training of youth at School" at the National Congress on Physical Training held in Szeged.
1931	Chairman of the Committee for Research of Natural Sciences. Announces his discovery of Vitamin C. Gets several invitations for lecture tours abroad.
1932	Corresponding member of Societé Philomatique of Paris. Wins Prize of the best Lecturer at the Royal Medical Society of Budapest. His article and lecture on "Reform of Medical Training".
1932 Apr. 10	Lecture in Stockholm.
1933 Oct. 24	Protests against dissolution of József Ferenc University of Szeged.
1934	Member of Karl-Ludwig Academy in Halle. Member of Societé de Biologie. Presentation at

the Vitamin Congress in London Member of State Examination Board in Pharmacy at the Szeged University.

1934/1935 Dean of the Medical Faculty. With István Rusznyák and others he discovers and applies Vitamin P.

1934-1936 Temporarily undertakes the management of Department of Organic- and Pharmaceutical Chemistry.

1935 His Department moves to Dóm Square. He with his family moves to 14, Rudolf Square. Takes part in the International Congress on Physiology in Leningrad.

1935 May 16 Corresponding member of the Hungarian Academy of Sciences.

1935/36 Prodean of the Medical Faculty. Visiting Professor at the Harvard University (USA).

1936 Member of the National Committee for Higher Education, the Hungarian Committee for Biological Research, the National Committee of Natural Sciences. Secretary of the Hungarian Physiological Society. Member of the Biological Gesellschaft, Duodecim Medical Society of Finland, Jugoslav Medical Society.

1937 Febr. Decorated with the Corvin Wrath.

1937 Oct. 28 Winner of Nobel Prize in Medicine.

1937 Nov. 5 Delivers a lecture on the Hungarian Radio.

1937 Nov. 16 Banquet of Rotary Club in Hotel Hungaria in Szeged.

1937 Nov. 25 Decoration with the Corvin Chain.

1937 Dec. 1 Freeman of Szeged.

1937 Dec. 10 Presentation of Nobel Prize in Stockholm, his speech on the Swedish Radio.

1937 Dec. 11 His lecture in Stockholm.

1937 Dec. 16	Lecture in Goteborg.
1938 Jan.	Szent-Györgyi plaque has been prepared.
1938 March	Meeting with "old" schoolmates of Lonyay-Street.
1938 Apr. 7	Honorary Doctor of József Ferenc University of Szeged.
1938 May 6	Full member of the Hungarian Academy of Sciences.
1938 Aug.-Sept.	Lecturing tour in the USA, his wife does not return to Hungary. His daughter Nelly studies in Cambridge then in Switzerland.
1938 Sept.-1939 Febr.	Visiting Professor of the University of Liege.
1938 Nov. 3	Honorary Professor of Sorbonne (Paris).
1939	Member of National Committee of Scientific Qualification. Decorated with the Second Order of Saint Sava Cross of Jugoslavia. New research field - biochemistry of muscle motion.
1939-1943	Member of the Upper House of Parliament.
1940	Decorated with the Cross of Leopold the 2nd of Belgique. Chairman of the Committee for Physical Education of the Szeged University. Professor President of the Athletic Club of the University. His daughter comes home. He buys a villa house in New Szeged.
1940 Aug. 1-14	Takes test of A, B, C levels in gliding.
1940 Nov. 12	Inauguration of Miklós Horthy University of Sciences.
1940 Dec. 13	Establishment of the Student Union of Szeged University (SZEI).
1940/1941	Rector of the Szeged University of Sciences.
1941 March 15	Inauguration of University Club.

1941 Apr. 2	Premier of Hamlet of the Theatre Group of the University.
1941 Oct. 18	His second marriage. His wife Márta Borbíró.
1941 Dec.	Participation in Pilot's Training Course.
1941	Decoration with the Hungarian Cross of Honour.
1941	Wide range attack of Press because of his democratic reforms and anti-fascism.
1941/1942	Prorector of the Miklós Horthy University.
1942	Press attacks wear out his health, gets exemption from lecturing. Starting of resistance movement bearing his name.
1942 May 31	Honorary Doctor of University of Padova.
1942 Nov. 20	Receiving pilot licence for sport flight.
1943	Honorary Doctor of University of Lausanne (Switzerland).
1943 Febr. 13	Lecture at the University of Istanbul. Negotiations with English Diplomats.
1943 May 12	His lecture on the Radio about the roles of scientists in war.
1943 Jun. 21	His villa house has been broken into.
1943 Sept. 16	Celebration of his fiftieth birthday.
1943 Dec. 16	Reports on results of his research of muscles at the session of István Tisza Scientific Society held in Debrecen.
1944	Under police supervision, persecuted by Gestapo, forced to hiding.
1944 Apr. 26	Press attack of "We are Alone".
1944 Aug.	Leaves for good, hiding in Budapest.

1945 Jan. 10	Escapes further hiding, gets to Enying to the military headquarters of the Soviets.
1945 Febr. 9	Visits Szeged.
1945 Febr. 12	Resigns his membership in the Hungarian Academy of Sciences.
1945 Apr. 1	His article in the Free People (Szabad Nép) about the destruction of fascism.
1945 Apr. 27	Appointed Professor at the Budapest University as Head of Department of Medical Chemistry.
1945 May 30	Honorary member of the Hungarian Academy of Sciences.
1945 May-Jun.	Takes part in the celebrations of Academy in Moscow.
1945 Sept.	President of the Hungarian Academy of Natural Sciences. President of Committee of National Public Education.
1946	President of the Hungarian-Soviet Cultural Society. Awarded with Camaran Prize. Member of the Pápai Páriz People's College in Budapest
1946 Jun.	Launching of action "Science for Workers, Workers for Science".
1946 Jul. 24- Dec. 18	Vice President of the Academy.
1946 Nov. 17	Honorary chairman of the inauguration session of Sport-Pilot Union of Southern Hungary.
1946 Dec. 19 - 1948 Apr. 16	Head of Division of Academy.
1946 Dec. 22	Decorated with the silver order of Hungarian Liberty.
1947 Febr. 11	Talking about the public school education in his opening speech at the session of Committee for National Public Education.
1948 March 15	Awarded with Kossuth Prize.

1948 Departs for the USA. Head of the Marine Biological Laboratory of the Institute for Muscle Research, Woods Hole, Massachusetts. Research field: muscle contraction. His interest turns later towards regulation at cell level and cancer research.

1953 Discovery of Szent-Györgyi-Krebs Cycle.

1953 Albert Lasker Prize of the American Cardiological Society.

1955 Obtains American citizenship.

1961 Febr. Death of his first wife, Nelly

1960 Starts his studies on the thymus.

1963 July Death of his second wife, Márta

1963 Autobiography in Annual Review of Biochemistry.

1965 Febr. 2 Psalmus Humanus on the Hungarian Radio

1965 Sept. Marriage with his third wife, Susan

1966 August Divorce from Susan

1967 Decoration with Claude Bernard medal. Award for Modern Medicine. Golden Diploma handed by the Hungarian Ambassador.

1969 Sept. 21. Death of his daughter Nelly

1970 Wide range political activity against Vietnam War of Nixon Presidency. New York Times publishes his essay against the Vietnam war - "Fifteen minutes to zero". His anti-war book "Crazy Ape" Speech at the Hungarian Embassy on the celebration of Hungarian Liberation - insulted by fascist provocation. Issued in Hungarian: Contemplations of a Biologist.

1970 Dec. 25 About Szent-Györgyi in the program entitled "Our Motherland" on the Hungarian Radio.

1971 His second book of the Trilogy: What Next ?!

1972 Publication of "The Scientific Citizen".

1973 In Hungarian: "Living State", "Nature of Life" Government withdraws subsidy of his research. Establishment the network of the "Laboratory without Walls". Research supported by the National Foundation for Cancer Research subsidised by volunteer donators.

1973 Oct. 7 First homecoming after 26 years. Delivers lecture at the Loránd Eötvös University of Sciences.

1973 Oct. 11 Participates in the inaugural ceremony of the Biological Research Centre of the Hungarian Academy of Sciences, Szeged.

1973 Oct. 12 Honoris Causa Doctor of the Szeged Medical University.

1973 Oct. 16 Visits the World Federation of Hungarians, and is elected honorary member of Presidium.

1974 Two hours long interview at the Hungarian Television. Bibliographical parts were recorded by Hungaroton.

1976 Marriage with his fourth wife, Marcia Houston

1978 Jan. 7 Last homecoming as member of the delegate bringing home the Hungarian Royal Crown.

1978 Publication of "Living State of Matter" in Hungarian.

1983 Publication of "Selected Studies".

1983 Sept. 20 Awarded with the Rubies Decorated Flag Order of the Hungarian People's Republic.

1985 Apr. 22 World premier of the picture about Szent-Györgyi, entitled "Psalmus Humanus".

1986 Establishment of Museum on the History of Szeged Medical University.

1986 Oct. 22 Died in Woods Hole, buried on 25th.

1986 Dec. 15 Szeged Town Council, Szeged Committee of the Hungarian Academy of Sciences, Attila József University of Sciences and Szeged Medical University commemorate Albert Szent-Györgyi. Medical University announces decision of taking the name of its Nobel Prize laureated former Professor.

1987 Dec. 10 Ceremony at the Szeged Medical University. Taking the name of Albert Szent-Györgyi

1987 Dec. 11 Inauguration of the bust in the Szeged Pantheon in Dom square.

NOTES

1 Kis-kér was an old settlement near Bujáke. Miklós Szent-Györgyi was bailif of the estate there.

Vincze: Nobel Prize - Vitamin C - Kis-kér. Szabad Föld, November 1986.

2 Pál Szent-Györgyi graduated at the Faculty of Law of the University of Berlin and at Conservatory. He returned to Hungary in 1914 and was drafted in the same year.Did military service all throughout the war. As a young lawyer worked in Esztergom as Secretary for Lord Lieutenant. Martos: Devotee of the Violin. Ünnep: 5, 8, 2829.

3 Albert Szent-Györgyi: Lost in the Twentieth Century. - Annual Review of Biochemistry 32, 1-13, 1963.

4 Albert Szent-Györgyi: Studies on the Structure of Vitreous Body. Természettudományi értesítő, 1916. 623-640.

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6 Records of Medical Faculty Session November 25, 1921. Original copies at the Dean'a Office.

7 Szeged (a paper) March 4 and 20, 1925.

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9 Guba F.: Albert Szent-Györgyi is 90-year-old.
Uj Tükör (a magazine), 17, 18 September, 1983.

10 Bagdy D.: Remembering Albert Szent-Györgyi (1983-1986)
Élet és Tudomány (a scientific magazine), 1986 November, 1414-1415.

11 Albert Szent-Györgyi: Physical Education of Students.
Testnevelés (a journal) 1937, 10, 12, 783-789.

12 Opponent of Men in White Gown. Lecture on Physical Educationat Schools.
Magyar Ifjuság (a paper), 1981, January, 44-45.

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Magyar Nemzet (a paper) 1941 February.

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Élet és Irodalom (a paper), 1983 October
Professor Szent-Györgyi Pilot of a Glider.
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18 Albert Szent-Györgyi: Reform of the Medical Training.
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19 Albert Szent-Györgyi: Training of Natural Sciences and Laboratory Work in Medical Education.
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20 Délmagyarország (a paper) 1933, October 22, 3, 4.

21 Supporting Staff of Medical Faculty Protested against the "Mutilation" of the University.
Délmagyarország (a paper) 1933, October 25.

22 Délmagyarország (a paper) 1930 November 14.

23 Typed Manuscript with signature.
Central Library of Medical Faculty.

24 Records of Medical Faculty Session, 1935, June 24.

25 Foederatio Emericana. Society of Catholic University and High School Students founded in 1921.

26 Records of Medical Faculty Session, 1935, December 11.

27 Figures of the chime clock in Dom square. - A Rector, Four Deans, twelve Students and the Janitor.
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28 Albert Szent-Györgyi: Biological Oxidations, Fermentations and Vitamin.
Orvosképzés (a journal) 1937, 27, 213-221.

29 Albert Szent-Györgyi: Vitamin C, Adrenalin and Adrenal Gland.
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30 Albert Szent-Györgyi: Comtemplations of a Biologist. Cf. No. 8.

31 Albert Szent-Györgyi: Contemplations of a Biologist. Cf. No. 8.

32 Guba F.: Albert Szent-Györgyi and the Education of Science.
Magyar Tudomány (a journal) 1983, 28, 9, 696-699.

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Természet Világa (a magazine), 1983, 113, 9, 419-420.

34 Gergely J.: Congratulation to Albert Szent-Györgyi on his 90th birthday.
Biokémia (a journal) 1983, 7,3, 31-32.

35 Celebration of Professor Szent-Györgyi in Stockholm.
Budapesti Hírlap (a paper) 1937, December 14, 15.

36 Nobel Prize Laureate Albert Szent-Györgyi, the World Famous Discoverer of Vitamin C.
Délmagyarország (a paper) 1937, October 29, 1-2.

37 A World Sensation: The Nobel Prize Laureate Professor Albert Szent-Györgyi.
Szegedi Új Nemzedék (a paper) 1937, October 29, 1.

38 Records of Medical Faculty Session, 1937 October 29.

39 Archives of Csongrád County. A Record.
1937, October 29.

40 Records of Medical Faculty Session, 1937 November 26.

41 "I Have a Strong Faith in Victory of Peace" Radio address.
Délmagyarország (a paper) 1937, November 7.

42 "I have a Strong Faith in Victory of Human Compassion and Peace over Destruction and Hatred"
Délmagyarország (a paper) 1938. January 22, 3-4.

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Magyar Cserkész (a paper) 1937/38, 19, 15.

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1937, October 29.

46 Archives of Csongrád County. Records of General Assembly of Town Council. 1937, December 1.

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50 Albert Szent-Györgyi - Freeman of the town, Szeged.
Délmagyarország, 1937, November 5, 3.

51 Interview with Professor Albert Szent-Györgyi.
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52 Szabó T., Zallár A.: Albert Szent-Györgyi at the Ceremonial Meeting of "Old-Boys" of Reformats' School of Lonyay Street.
Confession, 1987, 1, 78-87.

53 Banga Ilona: Greetings to the 90th Years Old Albert Szent-Györgyi.
Orvosi Hetilap (a journal), 1983, 124, 40, 2435-2436.

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Biokémia (a journal) 1983, 7, 3, 13-15..

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Délmagyarország (a paper), 1934, May, 13, 5.

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61 Interview with Professor Albert Szent-Györgyi.
Magyar Nemzet (a paper) 1941, February 26.

62 Address of Albert Szent-Györgyi to the Students on the Establishment of Student Union.
Délmagyarország (a paper) 1940, December 14, 3.

63 Address of Professor Szent-Györgyi on Student Unity - Pécs.
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64 Hungarian and Christian.
Függetlenség (a paper) 1941, March 6.

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Magyar Nemzet, 1941, February 26.

66 M.L.: Vitamin Bar.
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69 Szegedi Híd (a paper) 1941, June (first issue)

70 Esti Kurír (a paper) 1941, June 4.

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Új Idők (a magazin) 1941, 47, 15, 456-457 (Easter)

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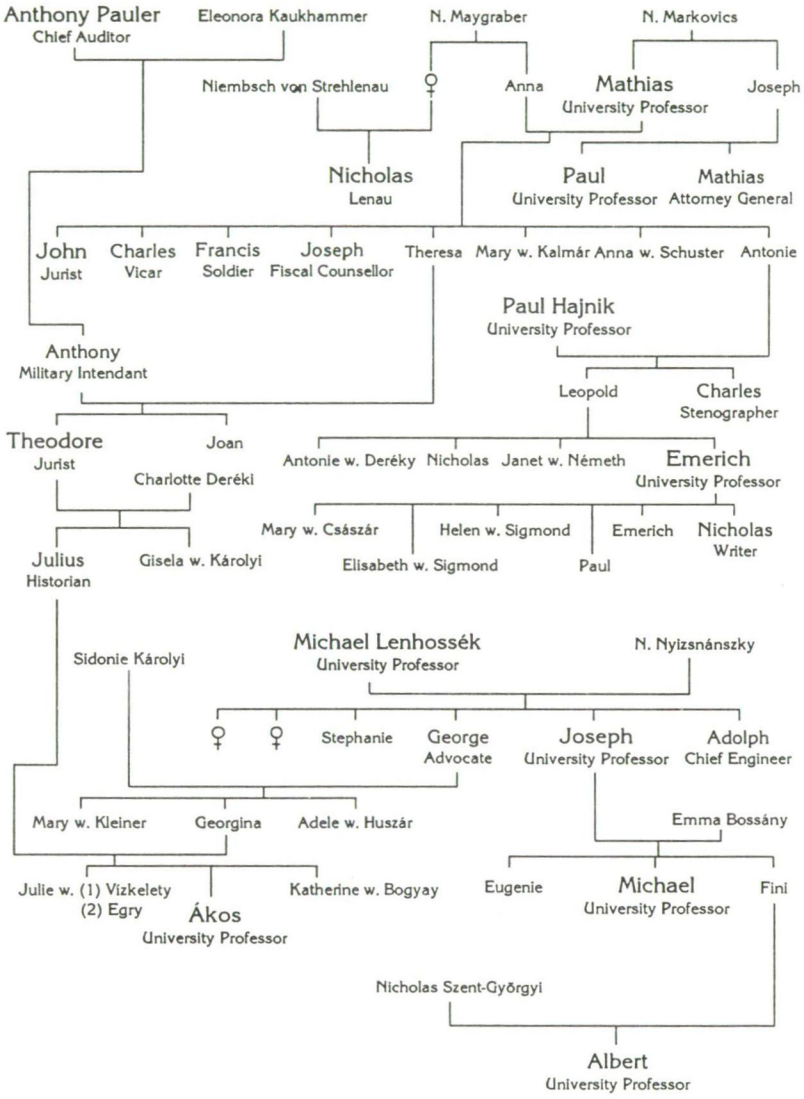
Annex No. 1

PAULER-MARKOVICS-LENHOSSÉK FAMILY



Annex No. 2

INAUGURAL ADDRESS OF ALBERT SZENT-GYÖRGYI AS FIRST RECTOR OF THE UNIVERSITY

11th of November, 1940

"...Old tradition is at the University, that Rector taking his office delivers an address on subject close to his work, thereby introducing himself to his University. For this ceremonial occasion I have chosen subjects dearest for my heart - the University and the Young. I have twenty years long experience and contemplation in background to sum up my views briefly.

Vocation of University is three-fold: The oldest one is to compile, spread and enrich human knowledge. The second one is to educate scientists for the future, who will continue our professions. The third, a newer, but not less important is the third vocation to give qualified citizens furnished with the means of knowledge for the Nation.

I wish to discuss these three vocations adding, that our University has a fourth, a unique task: to be the intellectual centre of the Hungarian Great Plain.

Most precious treasure of human mankind is all the noble, fine and worthy which have been created by human brain and spirit. From these treasures, University is dedicated to preserve, disseminate and cumulate knowledge. University enriches knowledge from the common storehouse of human genius. Therefore, it is a justified expectation from University to be above policital vicissitudes, to keep hatred out of its gate, and save its ideas unhurt for the future.

University has to enrich knowledge not only preserve it. And since it is inherited from thousand years' acquaintance with spiritual efforts of mankind, it is duty of the University to further develop and to carry on the torch of wisdom. One of the must important duties of University is research, exploring new facts. It should be imbued by love of truth and preserve the atmosphere of intellectual freedom, without which everything wastes away.

University in this efforts is ally and partner of all the other scientific institutions regardless their language or nationality.

Research work is not only contribution to the grand issue of human intellectuality, but it is also a part of everyday work. Adequate education can be performed only where spirit of research and zealous love of truth exist. Research work can also be regarded as a patriotic duty, since the science is the field, where small nations can compete with the large ones and can leave marks in human history.

I do not wish to talk about the second task, education of scientists. I would rather come to the point of education of qualified citizens. This task do not really belong to the original vocations of the University. Nowadays University has opened gate for

great many young people who do not mean to be scientists, but competent members of society. University which used to be financially independent, now accepts state support, therefore cannot be reserved of fulfilling and accommodating to the demands of students and the society. That faced the University to a serious problem. University used to educate only scientists and preach about science. Majority of youth now do not want to be scientists. Anxiety emerged that adjusting the education to the public demands, the university will lose its prestige. Keeping our standards very high we lay the burden of a knowledge on our students that they do not need in life and after all, we educate "semi"-scientists inapt for public life. This problem is growing together with the progress of science. There is no middle way. University will have to divide tutorials into two parts: into lectures serving would be profession and lectures serving scientific education. I am convinced that University has to adjust to the demands of students and everyday life. The shortcoming of our whole public education is - secondary and higher alike - that requirements are considered in aspect of the subjects taught and not in the interest of the student.

By that, I have arrived at the second major issue. Should the University only to teach or to educate as well? If we concern the concept that University should educate citizens for the society, the question emerges what these citizens should be like. If we require only a professional skill we have to teach only. But if we require a whole range of spiritual properties -consciousness of vocation and responsibility, crave for creation and knowledge, empathy and unselfishness - we have to educate as well. And I want to add that qualified vocation needs healthy individuals, so I would like to see broad-shouldered, vigorous university citizens, and that is also the responsibility of the University.

As far as teaching itself is concerned, I regard understanding of interrelationships and evoking of interest more important, than filling brains with excessive data. Short is the time of education compared to the content of life, and lifeless data soon diminish. If craving for knowledge is not inspired in students, leaving the school they will find themselves very soon with empty heads and hands in life.

To meet all these demands University has to cope with a lot of problems. One of these problems is that secondary education with its dry, data oriented teaching system do not aim at the development of character and intellect. Thus we get indifferent, prematurely old, young people with crooked backs, who are interested only in a job with pension. Neither can secondary school make a selection for us. An excellent certificate of a secondary school do not explain anything to us. It would be desirable to get young people dedicated for intellectual career admitted to Universities, regardless the financial or social situation of their parents.

Another problem of Universities is their overcrowdedness, disproportion of students and academic staff. That creates an unsurmountable distance between them. It is a fact though, that we can accomplish our vocation if a teacher is not only teacher but also a friend, colleague and brother.

I sincerely hope that our University will be able to meet these requirements. The friendly atmosphere of Szeged will help us to create intimate and confidential relationship between teachers and students, since it is the only way to teach well and educate for patriotism which is not of echoing slogans and to die for ourcountry if needed - but which is more difficult - to live for it."

Annex No. 3

ALBERT SZENT-GYÖRGYI:

Address delivered in the Swedish Radio on 10th December 1937.*

Ansprache zu halten im schwedischen Radio am 10.12.1937.

Im Augenblicke, in dem ich mit dem Nobel Preise die höchste Auszeichnung erhalte, die einem Wissenschaftler zu Teil werden kann gedenke ich meiner Mitarbeiter und jener internationaler Hilfe und Kollaboration der ich mein Leben und alle meine wissenschaftlichen Freuden und Resultate verdanke. Es war das grösste Erlebnis meiner langen Wanderjahre, dass ich mich überzeugen kannte dass die Menschen überall, in aller Herr Gotts Ländern gleich gut und wohlwollend sind. Überall fand ich helfende Hände und menschliche Solidarität.

Mein Empfang in Schweden verstärkt mich weiter in dieser Überzeugung. Dass ein Sohn eines fernen, kleinen Volkes hier mit so viel Liebe und wohlwollen empfangen wurde, beweist mir, dass auch in diesem Lande die allmenscliche Solidarität, der Glauben an eine gemeinschaftliche menschliche Kultur hochgehalten werden. Die Nobelstiftung selbst ist ja auch nur eine Frucht desselben Geistes.

Es ist mir eine grosse Beruhigung zu wissen, dass die heutigen politischen Spannungen und Gehässigkeiten ihren Grund nicht in der menschlichen Seele, nicht in der Seele des einzelnen Menschen haben, also nicht unvermeidlich sind. Wir müssten nur alle stärker an der Macht der Liebe, als an der Macht der Gewalt glauben, mehr den Menschenmord verachten, auch wenn man ihn Krieg nennt, wir müssten mehr überzeugt sein, dass das wesentlichste am Menschen nicht seine Sprache, sein Pass oder sein Geburtszeugnis sei, dass ein friedlicher Ausgleich nur dann möglich ist, wenn wir nicht nur zu nehmen, sondern auch zu geben bereit sind, dass durch Zusammen arbeit mehr erreicht wird als durch gegenseitiges Zerstören, dass wir und unsere Nationen nicht alle **über** einander stehen können, sondern dass wir friedlich **neben** einander leben müssen, wenn wir glücklich sein wollen. Wir dürften nicht daran zweifeln, dass die einzige sichere Waffe der Selbstverteidigung das Wohlwollen anderen gegenüber sei, dass also auch unter Nationen jene einfachen Regeln der Ehrlichkeit und gegenseitiger Achtung herrschen müssen, die den Umgang in unserem Alltagsleben zwischen Mensch und Mensch bestimmen.

* Original manuscript corrected by Albert Szent-Györgyi (from the Szent-Györgyi collection of the Central Library).

Annex No. 4

ALBERT SZENT-GYÖRGYI: Toast at the banquet organized for Nobel Prize winners, in Stockholm, on 10 December, 1937.*

Royal Highnesses, Ladies and Gentlemen,

The first feeling of any guest, treated in this princely fashion can be no other than that of profound gratitude. To my mind, however, this magnificent celebration is much more than the expression of the splendid hospitality of a chivalrious nation.

I am the son of a small, faraway nation, and the other laureates have all come from different countries from all over the world. And we all were received here with signs of sympathy by the Swedish Nation. To two of these laureates I am linked with friendly memories of common work. We have come here to receive our share of that wonderful gift, deposited on the common altar of human ideals by a great Swedish patriot. This highest distinction has been awarded to us by an impartial judgement, without regard of our creed, race or nationality. All this proves to me, that there are links between man and man, reaching over national borders, it proves to me there are things about us, more important than our language, passport or birth certificate, that our common, human ideals are not extinct and are kindled in this country with profound love.

In the great struggle between ignorance, distrust and brutality on one side, knowledge, understanding and peace on the other, the scientist must stand fearlessly on the side of the latter, strengthening link between man and man and preaching, that the only effective weapon of selfdefence is goodwill to others.

This celebration here tells me, that this work is not hopeless. I thank you for this teaching with all my heart and lift my glass to human solidarity the ultimate victory of knowledge, peace, goodwill and understanding.

* Original manuscript corrected by Albert Szent-Györgyi (from the Szent-Györgyi collection of the Central Library).

Acta Physiol Scand 1989, 135, 423–426

Historical Note

Habent sua fata libelli: the adventurous story of Albert Szent-Györgi's book entitled *Studies on Muscle* (1945)

A. ZALLÁR and T. SZABÓ
Central Library of the Albert Szent-Györgyi University, Szeged, POB 9, 6701 Hungary

A surprising finding, which is interesting for the history of science, was discovered during the exploration of Szent-Györgyi's life. His monograph summing up the results achieved with his co-workers in muscle research was issued simultaneously in two countries in 1945. One was published in Hungary by the Medical School of Szeged, and the other by *Acta Physiologica Scandinavica* in Stockholm. Those who are not familiar with the circumstances of the publication might not be surprised at the fact that a paper written in English was published simultaneously in two distant countries. In the history of science there can hardly be another publication with such an extraordinary birth and origin, which is why we unfold the tale as a curiosity.

The Nobel Prize winning scientist of Szeged, a significant personality in the antifascist resistance movement, became a victim of persecution by Hitler's Gestapo, especially after his mission to Istanbul in 1943, when he negotiated with English representatives on Hungary's turning against the Germans. The action, however, came to the attention of Hitler, who demanded the extradition of the Professor from Governor Miklós Horthy. The Hungarian authorities ordered his house custody until the German occupation on 19 March 1944. The Professor's situation became more and more uncertain after the German occupation, and he was forced at Easter, 1944, to escape from the Gestapo. At that time he was hidden as a farm hand on the estate of the relatives of his second wife (Márta Borbiró) in Szabadka. His villa house in New Szeged was taken over by a German officer and the Gestapo tried to discover the Professor's residence.

The scientist did not break his contact with his Institute even in that perilous situation. He frequently visited his Institute so as to prepare the results of his studies on muscular function for publication. It was on 1 August, 1944, when he handed the 150-page manuscript to the Szeged Press, and after a couple of days left for Budapest, where he stayed at an unknown place. He wrote a few letters to Ilona Banga, asking for the galley proof of the manuscript in the last one. It could not be realized, however, due to war conditions. Szent-Györgyi doubted that his study on muscle research would appear in Szeged at all, therefore he sent the manuscript of the book to his Swedish colleague, Hugo Theorell, to publish it in Stockholm. Though he did not give his address because of his illegality, the correspondence endangered his life because his Swedish friend confirmed the receipt of the manuscript in a wire addressed to 'Albert Szent-Györgyi, Swedish Embassy, Budapest' and that was how the Gestapo learned where he was staying. A hired mob attacked the Embassy the following day to arrest Szent-Györgyi. Fortunately, a German diplomat warned the Swedish Ambassador that the Gestapo had learned about Szent-Györgyi's hiding place. Therefore, during the night the Professor was smuggled out of the Embassy in the luggage compartment of the car of the Ambassador, Per Anger.

So, in spite of the persecution, hiding, adventures and unhappy turns, Szent-Györgyi's work came out after all to the greatest pleasure of Hungarian and foreign biochemists, and in two different publications simultaneously.

Hungarian researchers could read the results of the 'Szent-Györgyi School' as early as 1945. Results were available abroad not only in *Acta Physiologica Scandinavica* but also in different reference journals. It is also worth remembering that the largest medical finding list, the *Quarterly Cumulative Index Medicus*, gave information on the issue in Sweden only in 1947 (*Quarterly Cumulative Index Medicus*, 41, 1947, 1086).

The volume issued in Sweden was not

Received 9 September 1988, accepted 26 September 1988.

available in Hungary until 1988. This year, however, we have managed to get a copy for the Szent-Györgyi Collection of our library. Comparing the two editions it can be found that they are word for word the same – but for two editorial differences. Contents and abbreviations introduce the volume issued in Szeged, while they are at the end of the Swedish issue. Almost insignificant is the difference between the types of letters and arrangement of figures in the two editions. On the front page of the Swedish issue, there is an explanatory introduction from the Editor which reads: 'The publication of this paper as a supplement to the *Acta Physiologica Scandinavica* is due to the war conditions in Hungary and the fact that Professor Szent-Györgyi has obtained Swedish citizenship'.

Considering the events of 50 years before, the Szent-Györgyi study published simultaneously in Hungary and abroad is not only a curiosity in the history of science and research but also a document of an inhuman era. The monograph still holds great interest for scientists dealing with muscle research, as a principal reference.

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ACTA PHYSIOLOGICA SCANDINAVICA
VOL. 9. SUPPLEMENTUM XXV
(FROM THE INSTITUTE OF MEDICAL CHEMISTRY, UNIVERSITY OF SZEGED[1])

STUDIES ON
MUSCLE

By

A. SZENT-GYÖRGYI
M. D., PH. D., D. H. C., PRIX NOBEL

Stockholm 1945

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[1]) The publication of this paper as a supplement to the Acta physiologica scandinavica is due to the war conditions in Hungary and the fact that Professor Szent-Györgyi has obtained Swedish citizenship.
The Editor.

STUDIES ON

MUSCLE

FROM THE INSTITUTE OF MEDICAL CHEMISTRY, UNIVERSITY OF SZEGED

BY

A. SZENT-GYÖRGYI

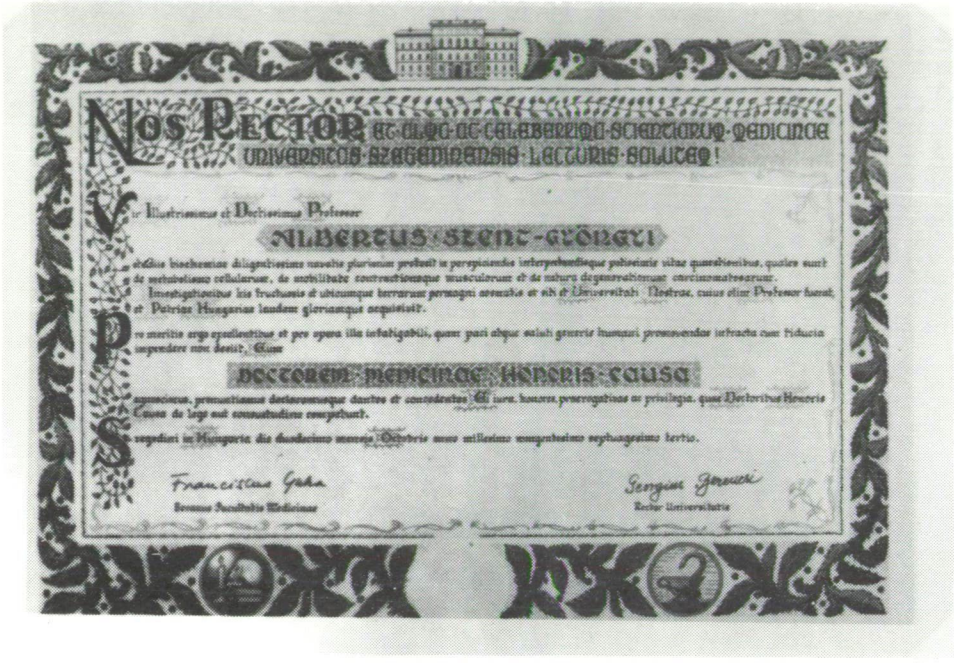
M. D., PH. D., D. H. C., PRIX NOBEL

(Sent to press on aug. the 1st. 1944)

SZEGED
VÁROSI NYOMDA
ÉS KÖNYVKIADÓ
RT.
1 9 4 5

Annex No. 6

Copy of the Honoris Causa Diploma


Nos Rector et Senatus Celeberrimi Scientiarum Medicinae Universitatis Szegedinensis Lectoris Salutem!

Albertus Szent-Györgyi

Doctorem Medicinae Honoris Causa

Francesco Gaha

Sergius Gyevai

1. Portrait of Albert Szent-Györgyi - 1944
(painted by László Vinkler)

2. In the laboratory with Ilona Banga - 1930s
(Photo: Béla Liebmann)

3. A characteristic Szent-Györgyi photo - 1930s
(Photo: László Újj)

4. Nobel Prize Diploma of Albert Szent-Györgyi - 1937

5. **Reading letters congratulating to the Nobel Prize - 1937**
(Photo: Béla Liebmann)

6. Bust of Albert Szent-Györgyi carved by Gábor Vágó sculptor - 1938
(Photo: Béla Liebmann)

7. Villa house of Szent-Györgyi's in New Szeged, Bethlen str. 2 (today Szent-Györgyi str.) 1940 - 1945

8. Conferment of Honoris Causa Doctor's degree - 1973
(Photo: Károly Ruszkai)

INDEX

STUDIA MEDICA SZEGEDINENSIA

Tomus 1.

Fasciculus 1. JAKOBOVITS, A.: Die Geschlechtshormone bildenden Eierstockgeschwülste. - Szeged, 1961, 82 p.

Fasciculus 2. KAHÁN, I. L.: Studies on urobilinoids. - Szeged, 1961. 74 p.

Tomus 2. VARRÓ, V. : Gastric acid defiency. - Szeged, 1962. 120 p.

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Tomus 4. KOVÁTS, T. G.: Endotoxin susceptibility and endotoxin hypersensitivity. - Szeged, 1967. 101 p.

Tomus 5. SZORÁDY, I.: Die klinische Bedeutung der Pantothensäure unter besonderer Berücksichtigung der Kinderheilkund. - Szeged 1967. 104 p.

Tomus 6. LÁSZLÓ F. A.-KOVÁTS, K.: Role of pituitary stalk in water metabolism and regulation of ACTH-andrenocortical system. - Szeged, 1968. 154 p.

Tomus 7. BERENCSI, GY.: Bepillantás a magyar falu egészségügyének múltjába, jelenébe és jövőjébe. - Szeged, 1969. 73 p.

Tomus 8. GELLÉRT, A. : Anwendung der Paraffintechnik bei der Herstellung anatomischer Präparate. - Szeged, 1971. 19 p. 54 t.

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